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Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH, AND DEVELOPMENT

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WORLDWIDE REPORT
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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BROADCASTING REVIEW BOARD'S PROPOSALS CITED, CRITIQUED

Hongkong Observer Comments

Hong Kong SOUTH CHINA MORNING POST in English 8 Mar 86 p 2

[Excerpts]

OVER the past several months the Hongkong Observers have studied the report prepared by the Broadcast Review Board.

We believe that a comprehensive review of our present broadcasting system is now needed to develop a better system of broadcasting for Hongkong for the next decade.

We support the argument for a public broadcaster that can provide alternative programming unencumbered by commercial considerations and free from direct supervision by the Government.

Such, in fact, is one of the major recommendations of the Broadcast Review Board report. However, the technicalities involved in achieving that recommendation, as proposed by the BRB report, have been subjected to considerable controversy. So have other recommendations of the report.

It is not without reason that the report has prompted so many comments from people inside and outside the industry. For a long time the local broadcasting industry has been a topic of public concern because it is not only a huge commercial enterprise but also the most far-reaching and powerful mass medium.

Not only does it provide entertainment, information

and education, it also by accident or design, influences public opinion. It is therefore important that the industry is run properly under proper supervision by the public.

In addition, as Hongkong progresses towards 1997, the industry is to play a more important role in reflecting the wishes of the populace on important issues. In the following sections, we attempt to comment on some of the more important recommendations of the BRB Report. The number in parentheses at the heading of each section refers to the paragraph in that report.

A Broadcasting Authority comprising civil servants and members of the public to oversee the arrangements for TV and Radio. This authority will replace present control structures namely, the Advisory Board and TV Authority. (4.46)

The current structure of broadcasting places too much power over the whole industry in one person, the Commissioner for Television and Entertainment Licensing. The recommendation to set up a Broadcasting Authority is therefore welcome. The terms of reference outlined by the report appear to be well stated.

Radio and Television Complaints Tribunal to resolve disputes which arise in the industry. (4.47)

This recommendation is too vague and probably impractical. Section 4.47A(a) in the report provides this tribunal with jurisdiction to hear complaints referred to it by the Broadcasting Authority or by members of the public against a licensee or any person alleged to have contravened the broadcasting ordinance, the licence conditions, or the codes of practice.

The tribunal thus will have to hear practically any matter under the sun as any action by any person in the industry may be construed by some members of the public to be in contravention of one or all of the three sets of controls.

Instead of having a tribunal to do the above, the Broadcast Ordinance, the licence conditions and the codes of practice should be clear and unambiguous enough so that the industry, with the support and under the supervision of the Broadcasting Authority, could police itself. The Broadcasting Authority should be empowered to impose penalties if after full board meetings, it finds that those controls have been violated.

Regarding the channel of appeals by licensee against the Broadcasting Authority, the current authority is the Secretary for Information and Administrative Services. There is no reason why he cannot continue to act in such a ca-

pacity, particularly when the Broadcasting Authority is an independent organisation no longer under him.

Regarding appeals by an advertiser against the Broadcasting Authority, the same procedure applies. In any case, the injured party can also take the Broadcasting Authority to court, and common law is always the ultimate guardian of the rights of individuals, corporations and the public at large. Therefore, the Hongkong Observers do not see the need for this tribunal.

Should an independent complaints channel be considered absolutely necessary to guard against collusion of the Broadcasting Authority with the Government, we advocate that the ombudsman be made the unified channel of redress and complaint against the Government and other public bodies.

Sole business not related to another corporation (4.89)

The principle of broadcasters sticking to broadcasting is good, but we do not agree that a licensee needs to be unreasonably confined to one single business activity. There are, however, situations when proliferation of business entities is undesirable. They are:

A. One corporation having undue influence over the public through control of a

significant number of media units (eg magazine, newspaper, radio and television etc).

B. Vertical integration through unfair competition resulting in monopoly or oligopoly of the entertainment and/or other service industries.

There are merits in avoiding these situations. However, except for these situations, the organisation of a broadcaster should not be unduly fettered. We propose that the Broadcasting Ordinance grant the right to the Attorney-General to petition the High Court for an order to force a licensee or its parent to divest the entity that has caused the above (A) or (B) to happen.

Provision of two Chinese and two English commercial services complemented by a public broadcaster is capable of providing a sufficient quantity of TV to meet Hongkong's needs (5.10)

Nowhere in the report is the above claim substantiated. The survey referred to merely reflects the desire of a large number of people for more diversified programmes. Although some of the programmes are currently being provided by RTHK, it does not logically follow that only RTHK can produce these programmes. Such misuse of statistics is regretted.

It is up to the Government and the public to decide whether it is desirable to have a public broadcaster. Like the BBC of the UK or the Public Broadcasting System (PBS) of the US, which is supported by the public and the Government, the public broadcaster does not have to be fettered by commercial considerations in its programming.

Public broadcaster specified exclusive broadcasting hours revenue from advertising therefrom (5.59-63; 6.62-68)

Although we support the principle of setting up a public broadcaster for Hongkong, we cannot accept its having exclusive broadcasting hours, as then it is not providing an alternative but imposing a Hobson's choice on viewers. We must recognise that regardless of whether the programmes broadcast by the commercial

stations are of redeeming value or not, those programmes are broadcast because they have support from the viewers and advertisers.

We urge local television stations to be more considerate of the diverse needs and aspirations of the viewing public and not to concentrate on just one or two types of programmes that they believe would attract audiences. Also, even if only a narrow scope of programme types is welcomed by the public, the contents can be varied to suit wider taste.

While we are aware there is always room for improvement on programme quality, in all fairness, we feel the programming on the Chinese stations in Hongkong is of a standard that we need not be ashamed of. And since people look to TV largely for entertainment, it would be against the public will to force the stations to concentrate more on information and education. Rather, we ought to encourage the stations to provide more diversified programmes to the public.

By the same token, the public broadcaster is relied upon to provide the informative and educational programmes that benefit a mature and intelligent society. Thus, we call for an independent and separate channel for the public broadcaster financed through public purse and conscientious individuals.

We echo the board's wish that a truly independent public broadcaster may be established through financial independence. However, we would like to point out that financial independence does not always guarantee editorial independence, and editorial independence may be achieved even though the public broadcaster is supported by public funds. It all depends on the board of governors of the public broadcaster and the will of the Government.

In an attempt to achieve financial independence, the BRB report made certain recommendations that we consider naive if not irresponsible. We doubt that RTHK can survive on its own by taking over two prime time hours' revenue from the stations. It will only defeat the purpose of its existence, hasten its de-

mise, and weaken the broadcasting industry at the same time.

First, unless RTHK "stoops" to produce programmes of "common" interest it may not get the ratings that are necessary to entice advertisers to pay the premium that the stations now enjoy.

Second, the projected unit costs based on the production cost of the commercial stations may not be adequate to support the more specific and refined requirements of the public broadcaster.

Our position on the subject of public broadcaster is as follows:

I. RTHK should become a public broadcaster.

II. We agree with the BRB that the public broadcaster should be governed by the same regulations as the other licensees.

III. Until such time that a separate channel can be set up for it, the public broadcaster should act as a production house of alternative programmes for the commercial TV stations:

(a) Each station should broadcast these PBS programmes seven hours per week, at least two of which should be between 7-11 pm on weekdays (or fewer hours as determined by the Broadcasting Authority or by request of the public broadcaster), and pay the public broadcaster at a fair market rate to be determined by the Broadcasting Authority. This rate should reflect the average cost of producing similar programmes by the commercial stations.

(b) General funding of the public broadcaster should be undertaken by the Government as with other Government subvented statutory bodies. The PBS must operate at costs comparable to commercial operations.

(c) If ratings of the PBS programmes fall below a certain level (to be determined by the Broadcasting Authority in consultation with the commercial stations and the public broadcaster), the commercial stations should be allowed to produce, by themselves, or through others, programmes of similar nature, to replace the public broadcaster's productions.

(d) Scheduling of the PBS programmes should be left to

the stations. However, we suggest that if the stations deliberately schedule these programmes at the same time to clash with each other, then there is a case for the Government to allocate specific times to the public broadcaster, as the stations are not interested in providing alternative programming to the public.

The main function of the public broadcaster at this point would be to provide alternatives that the commercial stations are unable or unwilling to provide and the time sharing arrangements would be temporary pending resolution of wavebands with our neighbours.

IV. As an acid test of whether a public broadcaster could survive as an independent service, the Government should call for tender for a non-profit organisation to take up the management of that service under the condition that the Government subvention would not exceed the 1986 level in real terms.

The Government should allow the management a free hand in determining the manning plan and the level of compensation for the employees as RTHK is hived off. Since the Government would have paid off the RTHK employees as it becomes disestablished, the successful tenderer would not be bound by civil service contracts.

We urge the Government to sever employees of RTHK, to enable the management of the public broadcaster to function without a civil service mentality.

The fifth service option (6.19 - 29)

While we agree with the conclusion of the BRB report that during the next licensing period the fifth service could not be set up, we do hope that such a possibility will not be forever discarded.

We share the view that the cost to operate a fifth service is prohibitive. But we remain unconvinced that the costs of \$196 million a year needed to provide four hours broadcasting a day is the best effort a determined service can do. We regret that the financial data that prompted the BRB to make that statement were not published so that we are unable to comment on this point further.

We understand that a master plan for optimising

the UHF wavelengths in the Pearl River delta region can be devised to allow not only Hongkong, but all its surrounding neighbours, to have up to seven services.

Unless such a plan is devised, Hongkong cannot expect to increase the number of services, as international conventions do not allow any territory to dominate wavelengths, let alone the fact that our neighbours have demanded that we do not use any more channels.

Such a plan must, of course require the active and co-operative participation of the local, provincial and central governments of China and the Government of Macau.

We call upon the respective governments to keep an open mind and to consider the merit of such a plan, particularly as we progress into a future where communication takes on an ever more important role, and UHF bands are used not only for TV entertainment. We specifically urge the Hongkong Govern-

ment to take a positive attitude and a leadership role in resolving this issue.

Furthermore, we invite the future broadcasting authority to become the prime mover to steer the industry towards five or more services, which would then truly give ample choices to viewers.

We sincerely hope that in the not too distant future, the public broadcaster will be mature enough to take up that challenge and the society sophisticated enough to demand its existence.

License, Satellite Views

Hong Kong SOUTH CHINA MORNING POST in English 15 Mar 86 p 12

[Article by C. K. Lau]

[Text]

Permission to use the broadcast airwaves should only be given to commercial licensees operating solely as broadcasters and to the independent public broadcaster.

And the public should be allowed to receive direct satellite broadcasting under Government control.

These are some of the conclusions drawn by a Umelco ad hoc group formed to study the Broadcasting Review Board's controversial proposals.

After addressing a Lion's

Club lunch meeting, ad hoc group member Mr Chung Pui-lam revealed that the conclusions had been discussed at Umelco's in-house meeting yesterday afternoon.

He said group members had accepted the board's view that broadcasting airwaves were community property and should thus be used in the best public interest.

They believed broadcast licensees should seek to entertain, inform and educate by providing a balanced schedule.

The regulation and moni-

toring of their services should be entrusted to a broadcasting authority, he maintained.

In addition, Mr Chung said, public hearings should be held when granting broadcast franchises and the services provided by the successful licensee should be subject to periodic review.

As Hongkong was an international city, Mr Chung continued, members also felt that the public should be allowed to receive direct satellite broadcasting under Government control.

The Legislative Council

said, however, that members were divided on many of the review board's other proposals and would be airing their views on these issues separately at Wednesday's debate in the council chamber.

Among issues they were unable to agree on were: the time slot to be allocated to the independent public broadcaster on existing channels; whether or not tobacco advertising should be banned; the introduction of cable television; and how the independent public broadcaster should be financed.

Independent Broadcaster Concept

Hong Kong SOUTH CHINA MORNING POST in English 20 Mar 86 p 13

[Text]

The chairman of the Broadcasting Review Board, Mr Justice Power, yesterday repeated his support for the setting up of an independent public broadcaster.

He was speaking at a lunch meeting of the Retail Management Association, 30 minutes before the Legco debate on the board's report, but said the timing was coincidental.

Mr Justice Power maintained that a study of local broadcasting had led the review board to conclude that the emphasis on entertainment was too heavy.

It had worked on the principles that the airwaves should be used not only to

entertain, but to inform and educate in the best interests of Hongkong people.

The duty of a public broadcaster, Mr Justice Power said, was to produce quality programmes in all areas, including drama, light entertainment, documentary and news commentary.

To do this, it should also be allowed to operate free from the commercial dictates which necessarily constrain commercial licensees.

Mr Justice Power stressed that the board's main aim had been to establish the need for an independent public

broadcaster, and that funding methods were secondary and could be fine tuned later.

However, he repeated the board's recommendation that the public broadcaster should be allowed to take advertising and be allocated the prime time from 7 pm to 8 pm each weekday on each Chinese channel.

After the lunch Mr Justice Power told reporters he hoped to see at least the "structure" of the proposed control measures on the broadcasting accepted.

Call for 'Watchdog Body'

Hong Kong SOUTH CHINA MORNING POST in English 20 Mar 86 p 14

[Text] A broadcasting authority should be set up and entrusted with regulating and monitoring powers on the broadcasting industry to ensure good service to the community, Dr Ho Kam-fai said.

The authority should hold public hearings to examine the performance of existing and potential applicants before permission to broadcast is extended or granted.

There should also be a public broadcaster with editorial autonomy but which would be made to report to a carefully selected board of governors appointed by the Governor.

This public broadcaster should be supported by public funds, said Dr Ho, the convenor of the Legislative Council's ad hoc group on the Broadcasting Review Board report.

These were two of the eight points unanimously endorsed by the Legco group on the broadcasting industry after thumbing through 50 submissions during numerous meetings.

The other points were:

--The Government has a duty to outline broad guidelines for the industry on standards and types of programmes, and the industry should be subject to some form of regulation and monitoring.

--The airwaves are the property of the community and payment should be made into public coffers for their use.

--Government action should enhance, not reduce, competition within the industry.

--The right to broadcast should be limited to commercial licencees and a public broadcaster.

--The industry should ensure that its programmes are balanced in content and should be entertaining, informative and educational.

--The Government should watch closely developments in broadcasting through satellite transmission and cable which do not require the use of airwaves.

On the controversial proposal to ban cigarette advertising on television, Dr Ho said while members were in full support of the Government's anti-smoking policy, they were divided on ways how this policy should be enforced.

Personally, he said, he was for the licence period of commercial broadcasters remaining at 15 years instead of the proposed eight years, to encourage long-term planning and capital investment.

"Public hearings at regular intervals, reinforced by the power to impose new licensing conditions, are effective safeguards against abuse of a long licence period," Dr Ho said.

Caution on TV Plans

Hong Kong SOUTH CHINA MORNING POST in English 20 Mar 86 p 14

[Text]

Mr Stephen Cheong called for extreme caution in adopting policies which might damage the viability of the television industry in future.

The Government and the Executive Council should seriously take this aspect into consideration in their deliberations on this issue, he said.

Mr Cheong said the BRB report did not seem to have addressed itself in sufficient

detail to the need for a viable television industry.

"The report does not include examination of the degree of contribution, or otherwise, the current TV industry may make to our society," he said.

He said the board seemed to have taken for granted that there would in future be a viable television industry.

Therefore it had not examined the adverse impact their various recommenda-

tions might have on the industry.

He said television had helped ease the daily pressures of life in Hongkong and thus contributed to the stability of our society.

He said the BRB's proposed funding arrangement might not be practical as it might not benefit all the parties concerned, including the public broadcaster itself.

Review Board's Position

Hong Kong SOUTH CHINA MORNING POST in English 20 Mar 86 p 14

[Text]

The objective now is to see beyond the controversies and to avoid being swayed by emotion and tendentious arguments when deciding on the proposals in the Broadcasting Review Board's report.

The Chief Secretary, Sir David Akers-Jones, made this exhortation when winding up the debate on the report.

"(We must) take a cool look at the real issues in order to arrive at solutions which will be welcomed by the public and, viewed dispassionately, accepted by the private interests involved."

"Whatever decisions are

made about the future of broadcasting, they must be based on common sense and sound judgment and, above all, they must be made in the wider public interest," he said.

Few reports of a similar nature had aroused such debate and diversity of opinion as the BRB report, Sir David noted.

The licence to broadcast is different from other kinds of commercial licence and enterprise. It is subject not only to normal commercial imperatives but places on the licensees, the operators, a heavy public responsibility.

"They have been entrusted with a precious resource which has great influence over the minds of men, women and children," Sir David said.

"And because it is a public trust, because of its all pervading nature, the Government of any place has with justification to apply to the broadcasting industry sensible restraints and a greater degree of regulation and supervision than would be applicable to other commercial enterprises operating in an entirely free market."

It was public knowledge that an application has been

made to the Government to operate a cable television service to one of the large residential estates, he said.

"A cable television service could, it is asserted, offer the purchaser a greater choice of programmes than provided over the air."

"This will require careful evaluation because, if it proved popular, it would clearly have a far-reaching effect upon the existing television broadcast stations."

Sir David said the Government expects to reach decisions on the principal recommendations of the BRB during the next six months.

Criticism of Board's Report

Hong Kong SOUTH CHINA MORNING POST in English 20 Mar 86 p 14

[Text]

The Broadcasting Review Board's effort to create policy guidelines for the Government to adopt has been a failure, Dr Helmut Sohmen said.

In a highly critical speech, he said the BRB report suffered from trying to achieve "too many and often contradictory objectives."

If the report had intended to create the maximum amount of controversy, said Dr Sohmen, it could not have done better.

"It wishes to see higher standards being set and maintained, but is unhappy with the commercial success of at least one licensee — a success which ultimately will help to ensure better quality.

"It recommends a change in the basis of royalty payments in order to improve Government revenue from a limited resource, but at the same time argues that the licensees should only be engaged in the business of broadcasting and that their access to a fairly important source of advertising income should be blocked.

"And, the board takes issue with the dominant position of one of the commercial television licensees on the one hand, but recommends a monopoly within certain timeframes for a public broadcaster on the other."

Dr Sohmen added that the board's proposed control on corporate activities would prevent licensees from strengthening their financial viability.

He argued that franchised enterprises in Hongkong subject to Government control or supervision are generally permitted to engage in other cor-

porate activities.

He said the board apparently had not considered the possibility of introducing some control over the commercial activities of the licensees, along the lines of the Schemes of Control which exist for some of the public utility companies.

Instead, a sledgehammer approach is being advocated, he added.

Dr Sohmen said it certainly did not reflect good business sense for the board to recommend royalty payments based on the turnover of both the television and radio licensees, since turnover was never a satisfactory measure of the actual performance of an enterprise.

This would also tend to inhibit licensees from making the new investments which may be necessary or desirable to improve their programming and technical standards, he said.

Dr Sohmen proposed the imposition of a fixed annual royalty payment payable by commercial licensees for use of the airwaves on every licence anniversary date — irrespective of financial results.

This should be supplemented by an additional levy on profits from broadcasting activities proper, based on audited accounts to be submitted to the licensing authority.

Dr Sohmen said he was in favour of the board's recommendation to enact a new and comprehensive broadcasting ordinance and to establish a broadcasting authority.

But he was "hesitant to endorse the establishment of a complaints tribunal with judicial functions."

/9274
CSO: 5540/059

HONG KONG

TV LICENSE FEES COULD SUPPORT LOCAL TV BROADCASTING SYSTEM

Hong Kong HONGKONG STANDARD in English 4 Mar 86 p 2

[Text]

THE Government should impose television licence fees to support the setting-up of Radio Television Hongkong (RTHK), says a group of residents.

The group headed by Dr Peter C Y Lee — a member of the Television Advisory Board from 1975-1983 — stated in a lengthy memorandum that the proposal to use the prime-time slots of existing licensees for the transmission of RTHK productions is unworkable in practice and wrong in concept.

"There is no doubt that we need a truly independent RTHK which is not subject to any commercial constraints. This means that it must not be involved in any form of commercial

activity, other than commercial broadcasting," they said.

So, a TV-licence fee should be introduced, they added.

The licence fees, with the expected income from royalties by existing licensees, revenue from commercial radio-broadcasting and the recommended "deficiency grants" for RTHK, will make it possible to have an "independent" public broadcasting station.

This is better than asking the two existing licensees to surrender their prime-time,

said the residents.

The "fifth station", being financially independent, will be able to provide the general public a choice of programmes.

At the same time, through healthy competition for better ratings, it will force the existing licensees to produce better programmes.

The public, therefore, will ultimately benefit.

The residents also strongly urged that RTHK be made totally independent. It should not be part of the civil service, they

said.

"In principle, we do not see why funds should not be used to finance it:

"In practice, however, there are reasons, other than budgetary and financial, that led us to propose the introduction of a TV-licence fee."

The group said the public could come to terms with paying the licence fee if the amount collected is channelled into RTHK coffers and not the Government's general revenue.

If the RTHK is still in the red despite the licence fees and advertising revenue, the Government should provide "deficiency grants" for the station.

But, the group warned, to "artificially" create a fifth station at the expense of the two licensees (one of which is known to be struggling for survival) may, in the long term, spell ruin for the entire TV industry.

/9274

CSO: 5540/059

NEW TV LICENSING RULES TO TAKE EFFECT IN JUNE 1986

Hong Kong SUNDAY STANDARD in English 9 Mar 86 p 2

[Text]

A NEW set of television licensing conditions will be ready in June, the Secretary for Administrative Services and Information, Mr Peter Tsao, said yesterday.

This will be two months after Executive Councillors discuss the controversial recommendations of the Broadcasting Review Board.

Speaking after the opening ceremony of an exhibition at the Hong-kong Polytechnic, Mr Tsao said a summary of public opinion towards the BRB report will be given to Legislative Councillors before they debate the issue on March 19.

This will be drawn up from more than 700 submissions received during the five-month consultation period.

After the Legco debate, a report will be compiled and submitted to the Executive Council in April, said Mr Tsao.

Meanwhile Legco members were preparing for what is likely to be a heated debate. More than 20 members may speak on the issue.

It was understood that members

have reached a consensus on a few main principles.

"It is a complicated issue. Everyone has his own opinion. It is difficult to reach a consensus," said a member of the Legco ad hoc group set up to examine the report.

Yesterday the group tabled its findings to the full council at a special in-house meeting.

The ad hoc group member, who preferred not to be named, told the *Standard* that Legco members unanimously supported the recommendation that a public broadcaster be set up in 1988.

But most of them rejected suggestions of financing the public broadcaster by revenue generated by broadcasting its programmes on the two commercial television stations.

"Radio Television Hong Kong is ready for independence. But it cannot survive if it depends solely on advertising revenue, which fluctuates."

"I think the government has a responsibility to ensure a financially

independent public broadcasting service," said the member.

When asked the best way to solve the problem, the member said it was a technical issue that the government should tackle.

Members were also split on ways to finance the proposed public broadcaster.

Options include increasing the royalty payments of the two commercial television stations, and corporate sponsorship.

Legco members also agreed with the government's anti-smoking policy.

However, members were split on whether a total ban on tobacco advertising on TV should be introduced as the BRB report suggested.

Members also stressed the importance of fair competition in the broadcasting industry.

Some strongly supported the suggestion to review the Television Ordinance to prohibit a licensee from either having subsidiaries or being a subsidiary of another company.

/9274
CSO: 5540/059

HONG KONG

TELEPHONE COMPANY READY TO INTRODUCE CABLE TV

Hong Kong SUNDAY STANDARD in English 9 Mar 86 p 5

[Text]

TAI KOO SHING residents may be the first group of local people to use the cable television service offered by the Hong Kong Telephone Company, a company spokesman said yesterday.

It was learned that the company formally submitted an application for a licence for cable television last month.

A pilot scheme is planned for early next year to test the acceptability of the service as well as to sort out potential difficulties.

The spokesman told a Chinese newspaper that 5,000 households at Tai Koo Shing would be selected for the pilot scheme.

It is estimated that if a licence is granted, the company would have to invest about \$1.5 billion in the project.

The company would offer 14 channels. Four would be reserved for existing television stations, the other 10 would be allocated for the Macau television station,

Radio Television Hong Kong, TV video and other information services.

Cable television — which is common overseas — can offer audiences a variety of programmes.

But the fees charged may be a setback for it becoming widely used.

The spokesman said the company also submitted details of the service to the government. These include the content and quality of programmes, charges and the target audience.

Speaking after the opening ceremony of a social function at the Hongkong Polytechnic, the Secretary for Administrative Services and Information, Mr Peter Tsao, confirmed that the government had received an application for a licence for cable television.

He said this would be taken into consideration when the government finalised its plans for the future development broadcasting.

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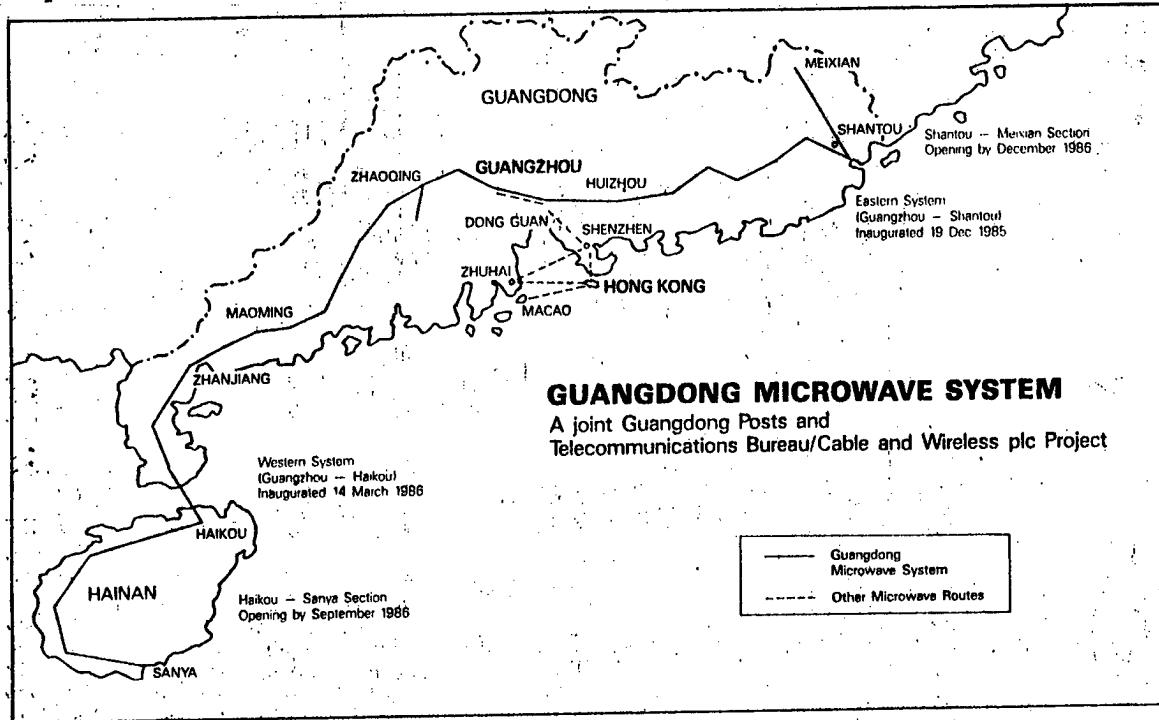
CSO: 5540/059

HONG KONG

NEW MICROWAVE SYSTEM PROVIDES LINKS TO PRC

Hong Kong HONGKONG STANDARD in English 17 Mar 86 Business Standard p 1

[Text]



A 1,000 km microwave communication system linking Hainan Island, Shantou and Shenzhen with Hongkong and Macau was completed and began operating over the weekend.

The Western Guangdong Microwave Communication System project took two and a half years and is a joint venture between the Guangdong Posts and Telecommunications Bureau and Cable and Wireless.

The main system links

Hainan Island in the west and Shantou in the east and is joined by another microwave route which connects with Hongkong, Shenzhen and Macau in the south.

Cable & Wireless said that with 1,800 communication channels, the system would be able to provide a major part of the telecommunications infrastructure for the economic and social development of Guangdong province, including Hainan Island.

This is believed to be one of the most rapidly developing regions of China and includes the Shenzhen Special Economic Zone.

During the opening ceremony of the system, Cable & Wireless chairman Sir Eric Sharp demonstrated the greater potential of the microwave system by sending an auspicious message by facsimile from Hainan.

The use of facsimile, which is ideally suited to transmit Chinese characters, is growing rapidly.

HONG KONG

BRIEFS

SCHOLARSHIPS IN PRC--Cable and Wireless (C&W) Hongkong, will provide a series of scholarships for students in China. Under the programme, the company will give 10 students the opportunity to study telecommunications in the U.K. and Hongkong. "This represents a further step in our policy of cooperating with China in the development of the country's telecommunication infrastructure," said Eric Sharp, chairman and chief executive of C&W. Sharp said that the students will participate in programmes lasting from 3 to 9 months. After completing the training, four students will work for the joint venture companies in which C&W has an equity interest. [Text] [Hong Kong HONGKONG STANDARD in English 20 Mar 86 Telecommunication Special p 3] /9274

INTEGRATED COMPUTER SYSTEM--The local computer firms are to launch an integrated computer system aimed at boosting the efficiency of stock exchanges and dealers. The Integrated Dealer/Exchange Environment System (INDEXES) was developed by NBI Systems, Inc. which specialises in office automation systems, and software development, and marketing company ABC Data Equipment Ltd. The system can print and record share contract and delivery notes and cheques; list bank positions, stock valuations and transfers, and provide up-to-the-minute reports and financial information, the companies said. [Text] [Hong Kong SOUTH CHINA MORNING POST in English 24 Mar 86 Business News p 3] /9274

CSO: 5540/059

NEC'S TELECOMMUNICATIONS EQUIPMENT STRATEGIES DESCRIBED

Tokyo TOSHI KEIZAI in Japanese Feb 86 pp 74-76

[Text] The telecommunications equipment business, leader in the C&C (computer and communications) field, is expanding rapidly from microwave communications systems and satellite earth stations to the optoelectronic and optical communications sector, and is maintaining a high annual growth rate of 20 percent.

High-speed facsimile transmission, high-speed data communications, teleconferencing, "Captain" (videotext information service), satellite television broadcasting -- rapid progress is being made in putting such diverse information transmission systems to practical use. It is truly the golden age of electronics.

In the midst of this, Nippon Electric Co., Ltd. (NEC), which can be called the "dragon child" of the "new media" era, is faced with the ordeal of a semiconductor market slump, but it is maintaining a high growth rate because of its performance in the strong, strategic C&C business. In particular, the telecommunications equipment business, which is NEC's specialty, has strengthened NEC's ability to survive as it enters the era of application of private communications satellites, optical communications and digital communications.

Computers, a 20 Percent Growth Rate Industry

C&C is a target of NEC's management, and the settlement of accounts for the first half of this fiscal year was a tacit answer that clearly showed the results of that strategy.

Most of the major electrical equipment manufacturers had lower profits because they suffered direct hits from the semiconductor market slump and the appreciation of the yen. NEC, however, with recurring profits of Y60,075 million (less taxes, Y32,075 million), showed a profit increase of 13 percent (39 percent) over the same period of the preceding year. Even rival company Fujitsu, Ltd., showed a 36 percent reduction in profits, and as a result, its ability to withstand recession, as well as its profit-making and growth capabilities, will be reviewed.

Several of NEC's strong points underwrote the increased profits. A direct cause of the business slump suffered by electrical equipment manufacturers was stagnation in the semiconductor market. Price cuts in the memory device sector

were particularly steep, but this accounted for only 30 percent of NEC's semiconductor business (the average for other companies was slightly under 50 percent). Furthermore, NEC produced a wide range of devices and was able to shift production. Additionally, unlike other companies, NEC produces semiconductors through its subsidiaries, so the burden of large-scale investments are not reflected in the parent company's settlement of accounts.

However, the real reason for NEC's remarkable ability to withstand recessions lies beyond the "flexibility" of its device production business. It lies in its high-growth capability in the C&C field. In the settlement of accounts for the first half of the year, its growth rate in both computers and telecommunications equipment was 19 percent above the same period of the preceding year.

In the computer field, the 20 percent increase in sales of OA (office automation) related small-scale equipment, such as office computers and personal computers, was outstanding. The growth in the field of personal computers for business use, of which NEC enjoys a monopolistic share of 70 percent, was a major source of support for the company.

As a result, if one looks at the composition of computers on the basis of CPU (central processing units), NEC's production of computers has become balanced, with 40 percent in large-scale computers and 30 percent each in medium and small-scale computers. Thus, NEC can respond easily to changing needs in the market and it can maintain a growth pattern that does not fluctuate widely. Incidentally, NEC's computer sales (including the value-added portion of exports and rentals converted to sales price) for the first half-year period was Y360 billion, a 25 percent increase in revenue over the same period of the preceding year, and since it expects sales to be Y810 billion for this fiscal year, it will have a very high growth rate of 22 percent on an annual basis. This can be viewed as a success of NEC's carefully thought-out strategy for the small computer market in anticipation of the advent of the OA era. Moreover, in today's era of information network communications services, in which efficient information handling is being sought by networking various kinds of computer systems, the balancing of computer types is an important force.

NEC's Forte, the Communications Equipment Industry

Needless to say, NEC's leadership in the communications industry also supports its C&C strategy. However, this encompasses a broad field which includes microwave communications equipment, earth stations for satellite communications, optoelectronics and optical communications. Even in the company's present midterm settlement of accounts, sales in the communications equipment sector came to Y344.6 billion, a 19 percent increase over the same period of the preceding year. This is as favorable as the company's performance in the computer industry. In the latter half of the fiscal year, sales have increased, especially in the optoelectronics sector, and on an annual basis, it is expected to reach Y705.0 billion, a 15 percent increase over the preceding year.

On the verge of entering the golden age of electronics, the strength of the communications equipment industry promises high growth to fulfill the enormous needs of the market in three sectors -- microwave communications equipment, communications satellite earth stations and optoelectronics.

NEC's wireless sector (microwave communications, earth stations) comprises 45 percent of its communications equipment business. In both of these sectors, the company is in the top level of the world market and holds 28 percent of the free market. The company in second place, AT&T, holds 25 percent, and in the free market, the gap is widening in terms of technological as well as research and development capability.

Microwave communications could be said to be the base technology of NEC's communications equipment business. With the radar technology and know-how developed before and during World War II as the base, NEC developed microwave communications after the war as telecommunications for peaceful use. NEC systems are highly trusted and already have been delivered to 80 countries. It is said that the company handles 5,700 earth stations. In recent years, the developing countries of Southeast Asia and the Middle East have been coming up with a constant flow of communications infrastructure policies, and because of this tremendous demand, the growth rate of over 10 percent probably will continue.

Responding to the Communications Satellite Era

Unlike the computer business, the communications equipment business is haunted by the difficulty of anticipating the needs of the rapidly changing communications service era and of following it in detail. In recent years, demand in the communications equipment market has been dominated by communications services which have grown out of satellite communications. At the same time, optical and digital communications techniques are starting to be introduced and in fact are almost at the stage of being put to practical use.

Thus far, NEC has prided itself in being the world's best in communications satellite earth stations in terms of technical capability and actual delivery. It handles about 50 percent of the earth stations which are members of Intelsat (a global commercial telecommunications satellite system). Orders for such earth stations will expand, but the approach the company is most interested in right now is communications satellites which are being developed at a private level.

In the United States, IBM already has jointly established a satellite communications firm, SBS (Satellite Business Service), which has provided communications services since 1981. In Japan, actual moves in this direction finally have begun to emerge.

At present, three groups have formed new companies. Japan Communications Satellite, which will introduce a communications satellite manufactured by the Hughes Corporation of the United States, was formed by Mitsui and Company and C. Itoh and Company. Space Communications, which is planning to introduce a communications satellite manufactured by Ford Aerospace Communications

Company of the United States, was formed by the Mitsubishi Corporation and Mitsubishi Electric Company of the Mitsubishi Group. Finally, Sony Corporation from the home electronics industry, is expected to form Satellite Japan with RCA of the United States. Japan Communications Satellite and Space Communications already have received approval and are preparing to launch Japan's first private communications satellites in 1987-88.

Once the communications satellites are realized, comprehensive digital communications services, including high-speed facsimile transmission, high-speed data transmission, and telephone and television conferencing, will become possible. This will provide the most effective services in terms of office automation.

Naturally, a tremendous demand will be created for communications-related terminal equipment for building networks which will tie into these communications satellites. It is said that with the launching of each group's communications satellite, there will be a demand for 2,000-3,000 earth stations alone. As a result, competition will become fierce among communications equipment and general electrical equipment manufacturers. Already Toshiba, which was defeated by NEC for the position of chief contractor for the next broadcast satellite planned by the National Space Development Agency, is aiming at a roll-back and has entered the market for small-scale earth stations that use the KU-band (11-14 gigahertz frequency band).

It is said that Matsushita Electric Industrial Company, Ltd., also plans to enter this sector in affiliation with the Harris Company of the United States. In the midst of this competition, which involves newcomers as well, there are signs that NEC, the market leader, is quickly moving to establish an engineering service company with the Japan Communications Satellite group.

Since NEC already has a substantial performance record for small-scale earth stations, it wants to capitalize on being in the vanguard. In fact, NEC has delivered a total of 100 earth stations to the aforementioned SBC [as published]. Recently, NEC successfully concluded a deal with Federal Express, an express delivery service company of the United States, for a Y100 billion, high-volume order of facsimile equipment and for 5,000 small-scale antennas for its satellite communications service.

Entry Into Next Broadcast Satellite Sector As Well

In the domestic communications satellite market as well, NEC would like orders for earth stations, in affiliation with Japan Communication Satellite, to lead to high-volume orders for various types of equipment, such as signal multiplexers, which are part of network structures.

However, there are sectors in which NEC has not made inroads; namely, the Japan Space Development Agency's broadcast and communications satellites.

Thus far, the agency has launched about 20 scientific, weather, broadcast and communications satellites. NEC has been receiving contracts not only for scientific and weather satellites, but for broadcast and communications

satellites, the "key stations" of the new media era, the chief contractors, Toshiba and Mitsubishi Electric, consistently have been in charge of follow-on equipment. The pattern has been NEC for weather satellites, Toshiba for broadcast satellites and Mitsubishi Electric for communications satellite. However, NEC has been acknowledged by all to be the world leader in communications equipment, so it was very aggravating that it was not handling the most promising sectors of the era, those of communications and broadcast satellites.

That is why NEC challenged Mitsubishi Electric for the role of chief contractor for the next communications satellite, CS-3. Ultimately, NEC failed to capture the communications satellite role, but its tenacity paid off and it got the role of chief contractor for the broadcast satellite.

This broadcast satellite will be the second in the series which will be in actual use. Although the satellite bus will be manufactured by the Hughes Corporation, the communications system itself, from the transponders to the antenna and earth stations, is precisely the sector in which NEC specializes, so it has acquired a platform upon which to realize fully its potential in general electronics and communications technology.

Approach to the Optical Communications Era

Another sector of the communications equipment business which has hidden growth potential is the optoelectronic and optical communications field. Domestically, NTT is working on a plan for an information network system (INS) which will convert the national communications network from the present electrical communications to optical communications in the 1980's and 1990's.

Underlying this plan is the fact that electrical communications no longer can handle today's rapidly increasing volume or the qualitative changes -- from voice and alphanumeric letters to the transmission of computer data, pictures and graphics -- in communications.

Unlike electrical communications, however, optical communications require a relatively complex system. Analog systems are sufficient for voice and electrical wave modulation. However, optical communications are based on digital systems, so these must be various kinds of conversion functions. Moreover, the efficiency of the optical fiber cable which is used as the transmission path becomes more important. The efficiency of an optical fiber cable is determined by the distance which it can transmit light.

NEC, with free use of its semiconductor and laser technology, has achieved a non-relay record of 14 kilometers using a 1.5 micron laser beam (generated by laser diode), albeit on an experimental basis. Naturally, this is a world record. NEC's receipts in the optical communications sector came to Y60 billion for this fiscal year, which already accounts for 10 percent of the communications equipment business. It is quite possible that this will be a sector which will have even greater growth capability than microwave systems and satellite earth station systems in the future. Promising commercial products presumably will continue to be developed, from the INS trunkline to local area networks (LAN) or cable television (CATV), and then to such products as the optical disk memory device for data processing, which applies optical techniques.

PEOPLE'S REPUBLIC OF CHINA

CHINA'S SECOND COMMUNICATIONS SATELLITE LAUNCHED

Beijing LIAOWANG ZHOUKAN (HAIWAI BAN) [OUTLOOK WEEKLY (OVERSEAS EDITION)] in Chinese No 8, 24 Feb 86 pp 18-19

[Article by Zhang Chunting [1728 2504 0080]]

[Text] On 1 February 1986, China successfully launched another communications satellite which is to be stationed at 103° east longitude above the equator on 20 February. During the Spring festival, this reporter had an interview with the Deputy Minister of the Ministry of Astronautics, Sun Jiadong, who had recently been promoted from his previous post as Director of the Institute of Space Technology. The main topic of the interview was on the launch of China's second communications satellite.

Question: What are the differences between this geosynchronous satellite and the experimental satellite launched 2 years ago? What are some of the improvements on this satellite?

Answer: During the approximately 2-year period since April 1984, China's experimental communications satellite provided reliable telephone, television and broadcast services to remote regions such as Urumqi, Lhasa, Kunming, etc. Its performance has been as expected, and it has provided significant amount of valuable data. However, the performance of the omni-directional horn antenna designed more than 10 years ago has been less than satisfactory. Although the antenna beam covers almost one third of the earth, its effective radiated power relative to mainland China is only 21 dBW. On the new communications satellite, the omni-directional antenna was replaced by a directional, parabolic dish antenna which is pointed at the Chinese mainland. Its effective radiated power can reach 32 to 36 dBW, which is higher than the ERP of Intelsat-V. The number of channels on the new satellite is also double that of the experimental satellite, hence the communication performance of this satellite will be significantly better than the first satellite.

Question: Is it true that the launch of this satellite improved considerably over the last launch?

Answer: Yes. Everything went smoothly during this launch; both the injection accuracy and the accuracy of final station point were improved. This is attributed to the fact that some of the problems encountered during the launch

of the first satellite had all been resolved before this launch took place. The success of this launch demonstrated once more the reliability and the high injection accuracy of the Chinese carrier rocket "Long March 3." By using this carrier rocket, the life of the satellite can be extended because the fuel expenditure will be significantly reduced. The station accuracy of the first communications satellite was ± 1 , whereas this satellite has an accuracy of ± 0.2 , almost an order of magnitude improvement. This drastic improvement in station accuracy will enhance the utility of the satellite and also improve ground reception.

Question: A question of general concern is: how useful is this domestic communications satellite?

Answer: It primarily depends on the ability to build satellite ground stations. Because of the relatively low ERP of our first communications satellite, a ground antenna with a 10 m or larger aperture is required to receive the signal; its cost is relatively high. The new satellite requires an antenna with only a 6-m aperture. Even under the current condition of small scale production, each antenna unit only costs a few ten thousands of yuan. Last September, the Ministry of Astronautics, the Ministry of Electronics Industry, and the Ministry of Posts and Telecommunications collectively built 53 such units and installed them at remote regions, old revolutionary bases, and at regions where China's minority population live. Many provincial, regional and county broadcast and television organizations had placed orders for these antennas; even a few private businesses indicated interest in purchasing these units for the benefit of their local communities. Therefore, the market for these antennas is very large. At the present time, the Ministry of Astronautics alone has signed production contracts for several hundred units with various user organizations; deliveries of these units are expected sometime this year. Once these ground receiving stations are in place, the range of services of China's geosynchronous satellite including communications, broadcasting, television and education will undoubtedly be expanded, and this new satellite will play an increasingly more role in providing these services.

Question: Can you comment on China's future plans for satellite development?

Answer: The launch of this satellite and the launch of last year's earth resource satellite have demonstrated that China's satellite development program has already entered a stage of practical utilization, and its carrier rocket "Long March 3" has reached a stage of near perfection; they have also showed that China's telemetry and control technologies have reached a higher level maturity. During the next few years, China will continue to devote its energy to improve the performance, increase the capacity, and extend the useful life of its communications satellites so they may better serve China's economic development as well as its scientific, cultural and educational programs. From the long range point of view, China's aerospace industry should concentrate on improving the technological standards, and initiate an aggressive program of developing new space vehicles. During the period of the seventh 5-year Plan, we intend to finalize the designs of several satellite models and place them in service; we also plan to devote our research efforts in several key technology areas and apply them to the design and manufacturing of the next-generation satellites.

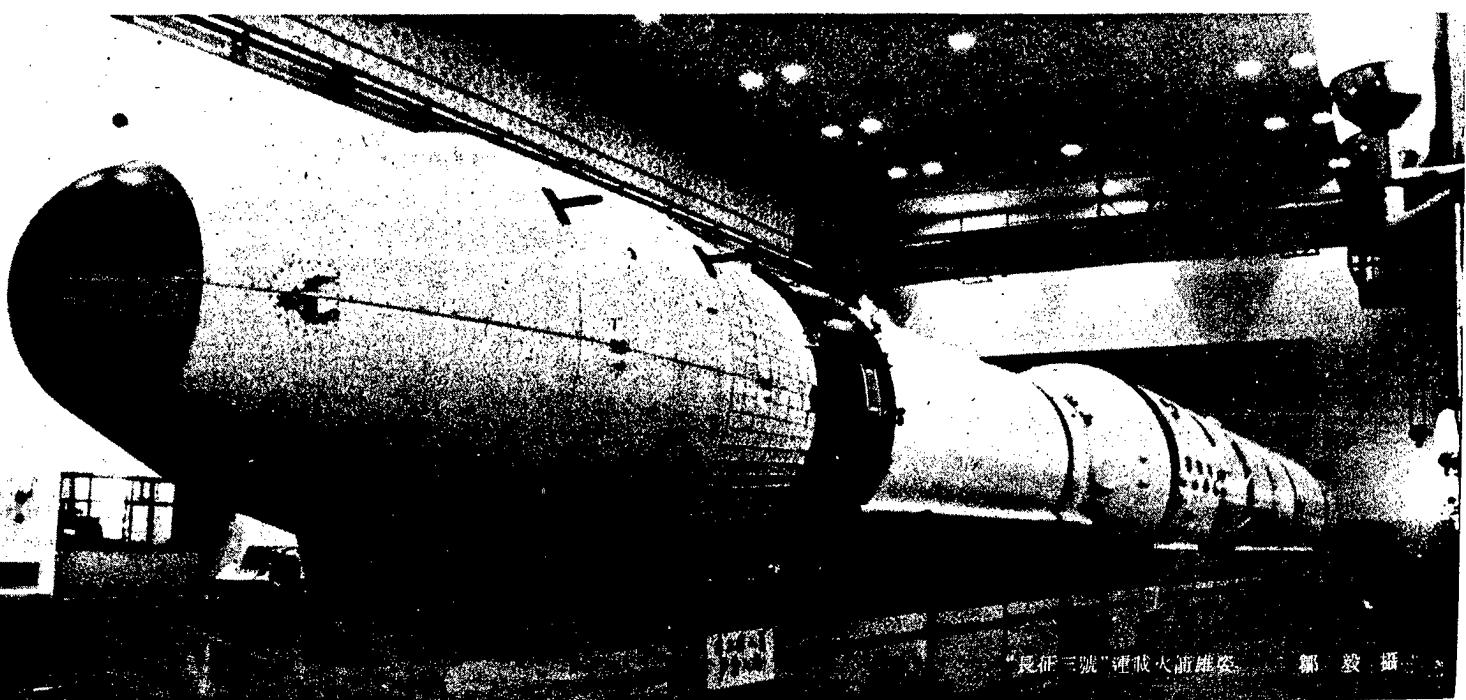


Fig. 1 The "Long March 3" Carrier Rocket

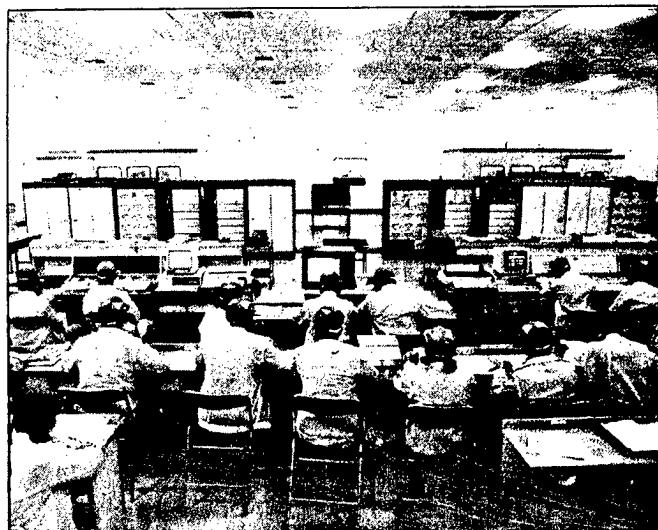


Fig. 2 A View of the Computer Room of the Control Station at the Satellite Launch Center

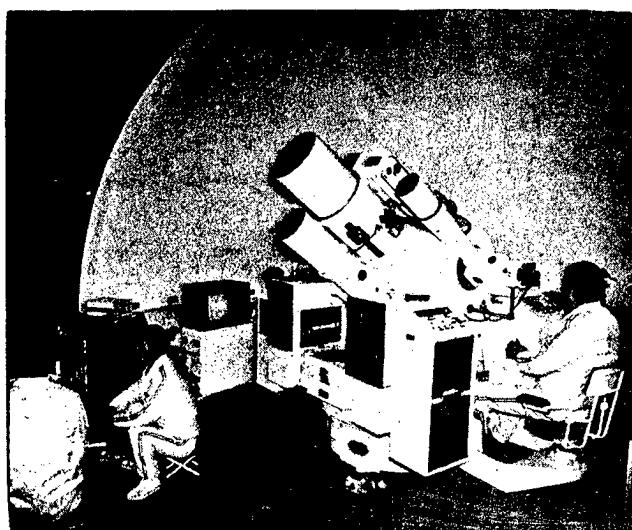


Fig. 3 A Laser Video Theodolite Tracking the Trajectory of the "Long March 3" Carrier Rocket



通信广播衛星被吊上“長征三號” 鄭毅 摄

Fig. 4 A Communications Satellite
Being Lifted Onto the "Long March
3" Rocket

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PEOPLE'S REPUBLIC OF CHINA

GUANGDONG INAUGURATES ZHUJIANG ECONOMIC BROADCASTING STATION

HK290611 Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 25 Mar 86

[Text] The provincial radio and television department and the provincial people's broadcasting station announced this morning at a press briefing that with approval from the higher authorities, the province will, beginning from today, start full-scale preparatory work for China's first economic broadcasting station, Zhujiang Economic Broadcasting Station. It is expected that the station will start operation within this year.

The Zhujiang Economic Broadcasting Station is a socialist radio station under the leadership of the provincial CPC committee and the provincial people's government. Its purpose is to serve the open zone in the Zhujiang delta, Shenzhen and Zhuhai special economic zones, and other areas across the province. It will broadcast news reports, publicize information, introduce new technology, provide recreational programs and make contributions for developing the commodity economy, improving people's life, promoting a good general mood of society, and building socialist material and spiritual civilization.

The station will have the characteristics of being popular, informative and comprehensive. It will offer services and recreational activities to the public, and will become the best friend of producers, consumers and businessmen. It will become a popular station of the masses.

At 30 minutes past every hour, the state will broadcast news reports; and on the hour, it will broadcast information on economics, science and technology. It will broadcast at other times programs hosted by announcers. Through a variety of education, informative and recreational programs, as well as an appropriate amount of advertisements, it will combine the work of propaganda with that of providing services, and combine education with recreational activities.

The station will broadcast programs in Cantonese, providing a daily service of over 20 hours on both medium wave and FM stereo. The broadcast signal will be transmitted through the province's special microwave link to relay stations across the province. Its broadcast coverage will cover the whole

province, including the Zhujiang delta, as well as parts of the neighboring provinces and regions. This will meet the demand of some 30 million listeners.

This morning's press briefing was attended by some 40 reporters from 14 journalism units, including those of Guangzhou and central, Hong Kong, and Macau units attached to the city. At this morning's press briefing, the responsible comrades of the parties concerned urged the whole of society to support the preparatory work of the station, so as to put it into operation earlier.

/6662

CSO: 5500/4155

PEOPLE'S REPUBLIC OF CHINA

NORTHEAST PROVINCES HOLD MEETING ON RADIO BROADCAST WORK

SK080740 Changchun Jilin Provincial Service in Mandarin 1030 GMT 7 Apr 86

[Text] The second experience-exchange meeting of the three northeast provinces on radio broadcasting was held in Changchun City from 2 to 7 April. Attending the meeting were representatives from the radio broadcasting stations of Liaoning, Heilongjiang, and Jilin Provinces, and from the radio broadcasting stations of 31 cities. Representatives from the Jilin Provincial Television Station also attended the meeting.

Attending the meeting by invitation as advisers were Comrade (Bi Zeng), deputy head of the Broadcasting Department of the Beijing Broadcasting College; Comrade (Chen Cun) from the Shanghai Municipal Radio Station; and Comrade (Zhu Shan) from the Shandong Provincial Radio Station.

At the meeting participants held extensive discussions on the state of affairs, problems, and experiences gained in the following three aspects and exchanged their experiences as well: 1) The reform of newscasts; 2) the state of affairs in producers' work; and 3) the personnel affairs system and management in the announcers' ranks.

Through exchanging their experiences representatives at the meeting deeply felt that announcers must have comprehensive capabilities in various fields and that they are the propaganda and journalist workers of the party and also are language experts. To be successful in this regard, announcers must possess higher standards in policies and theory, much knowledge of science and culture, and a stronger language capability.

At the meeting, the participating announcers generally heightened their sense of urgency, in which they had a strong will to firmly grasp study and to upgrade their work capability as soon as possible in order to better meet the need of work developments.

Comrade (Che Xidong), deputy director of the Propaganda Department of the provincial CPC committee, visited the meeting hall to have a talk with the representatives and also attended the closing ceremony of the meeting, at which he delivered a speech.

Attending the opening ceremony of the meeting were (Zhu Wencai), director of the provincial Radio and Television Broadcasting Department and general editor of the provincial radio and television station; (Yan Changyi) and (Hou Shufan), and deputy directors of the Broadcasting Department and deputy general editors of the station; and (He Jun), deputy general editor of the provincial radio and television station and head of the Jilin Provincial Radio Broadcasting Station. Comrade (Zhu Wencai) addressed the opening ceremony.

/6662

CSO: 5500/4155

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

ZHEJIANG FM STEREOPHONIC BROADCAST--The Zhejiang Provincial Broadcasting Station will extend its FM stereophonic broadcasts from 2 hours to 4 hours every day from 1 April. [Summary] [Hangzhou Zhejiang Provincial Service in Mandarin 1000 GMT 28 Mar 86 OW] /6662

GUANGDONG RADIO, TV REGULATIONS--The provincial radio and television department recently printed and distributed to radio and television departments of all cities, prefectures, and counties copies of regulations formulated in November last year on correcting new malpractices, and called for implementation of these regulations. The regulations include: It is not allowed to use the means of radio and television to seek one's personal interests; editors and reporters must strictly observe discipline in covering news; imported video and audio products must be strictly examined and controlled; and financial systems must be perfected. The provincial radio and television department also particularly demanded that when leading comrades of the provincial radio and television department work in localities in the future, radio and television departments in the localities must act in strict accordance with the relevant regulations of the central leadership and the provincial CPC committee and arrange their daily life in a plain way. [Text] [Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 11 Apr 86 HK] /6662

GUANGZHOU SATELLITE GROUND STATION--A satellite communications ground station is under construction in Guangzhou. The construction of a machinery and subsidiary building on some 2,100 square meters will soon be completed. An iron tower, 70 m high, has been erected. The equipment, imported from abroad, has arrived. This ground station is situated in (Daping) in the eastern suburbs of Guangzhou City. After it is put into operation, it can handle communications business, including telegraphy, telephone, and facsimile, with Beijing and Shanghai satellite ground stations; improve our province's communications with places at home and abroad; and also receive and transmit color television programs. [Text] [Guangzhou Guangdong Provincial Service in Mandarin 0400 GMT 11 Apr 86 HK] /6662

CSO: 5500/4155

DECISION TO PARTICIPATE IN SPACE STATION ANNOUNCED

Ottawa THE CITIZEN in English 19 Mar 86 p A4

[Article by April Lindgren: "Canada Allots \$800M to Space Service Centre"]

[Text] Canada will spend \$800 million over the next 15 years on a service centre in space that will be used to help build and maintain a permanent manned space station planned by the United States.

The long-awaited decision to participate in the \$15-billion project marks the beginning of Canada's biggest space endeavor.

In separate announcements in Washington and Ottawa, Prime Minister Brian Mulroney and Science Minister Frank Oberle said Canada will design and build a service centre that will play a major role in assembling the space station. Work is scheduled to begin 500 kilometres above the earth in the mid-1990s.

The centre, equipped with two remote manipulator arms based on the Canadarm technology, will subsequently be used to deploy and retrieve satellites located near the space station and to maintain experimental equipment attached to the structure.

Toronto-based Spar Aerospace has been named prime contractor for the project and six other firms, including Canadian Aeronautics of Ottawa, are the major subcontractors.

Over the next five years, \$220 million will be spent on the service centre, Oberle said.

The money will be made available through a "rearrangement of priorities" in other parts of the government, he said, refusing to be more specific.

In addition to paying for the service centre, the minister said some of the \$800 million will go towards a program encouraging Canadian industry to get involved.

Details of how much will go towards that program have yet to be worked out, he said.

Other issues still to be resolved include discussions with the U.S. about how much time Canadian scientists will get in the station's laboratories.

The space station, which will house about eight people in the beginning, is being advertised as a centre for space science and manufacturing.

Oberle said he "doesn't foresee" a situation where the Americans will try to use it for military purposes.

The minister said the service centre, to be constructed on a movable base the size of a typical bedroom, will be operated by Canadian astronauts. Two people at most will be required to run it.

Since 1984 when Canada was first invited to join in sharing the cost of the ambitious project, almost \$9 million has been spent trying to determine what type of involvement would be the most beneficial.

The annual Canadian budget for space has been about \$160 million.

Other partners in the space station plans include the 13-member European Space Agency which is spending more than \$2 billion on

an orbiting laboratory, and Japan, which has committed more than \$1 billion, likely to be used on a research laboratory attached to the space station.

The U.S. is expected to spend about \$11 billion on the station.

Liberal science critic David Berger said he favors Canadian participation in the project, but expressed concern that other much-needed programs are being cut to make money available.

Both he and NDP science critic Howard McCurdy speculated that the budgets of the major research funding councils may have been raided in order to pay for the space station service centre.

Direct government contributions to the councils will be frozen for four years beginning in 1987.

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CSO: 5520/73

GOVERNMENT PONDERING SALE OF SHARE OF CNCP

Ottawa THE CITIZEN in English 14 Mar 86 p A13

[Text] The federal government is mulling over the possibility of selling its share of CNCP Telecommunications Inc. of Toronto, Communications Minister Marcel Masse said Thursday.

Masse said in an interview that the government's share of CNCP, which it holds through its ownership of Canadian National Railways, could be sold if the right buyer is found. But he said no firm offers have been received from potential new owners.

The company is a partnership of Canadian National and Canadian Pacific Ltd. and the government would only be able to sell the 50-per-cent share held by CN. Canadian Pacific is unlikely to part with a profitable affiliate with good potential for growth.

Created in 1980 from the telecommunications arms of the two parents, CNCP has 4,000 employees across the country. In 1984, the latest year for which figures are available, CNCP earned a profit of \$16.3 million on sales of \$338 million and had assets of \$351 million.

But any attempt to sell the CN share of the company would be complicated. Unless CP itself bought out its partner, the company would be nervous about any new participation.

And analysts said that if a telephone company, such as Bell Canada or any of its affiliates wanted to buy in, there could be regulatory problems because of the possible lessening of competition in the telecommunications sector.

They said it is currently impossible to say how much a suitor would have to

offer for half of CNCP.

Masse, who hinted at the plan to sell the CN in CNCP during hearings of a Commons committee, said the government is still only "thinking of it," but it is a stated aim of the Conservatives to sell commercial holdings it feels should be in private hands.

And the minister added that the government is still studying about a dozen bids for Teleglobe Canada Ltd., the Crown company that handles overseas telecommunications.

Selling either company could also complicate a pet project of Masse's: To devise a new telecommunications policy for Canada. The minister met his provincial counterparts last month at Montreal to get some ideas on a policy and more meetings are planned at the deputy-minister level.

Ironically, CNCP is a big part of the reason Masse believes he needs a firm national policy on telecommunications. The company came within a whisker last year of breaking the monopoly power of the telephone companies in long-distance service and raised the spectre of U.S.-style competition among telephone utilities and specialized long-distance firms.

Although CNCP lost \$10 million and a lot of time in its bid for the right to compete with Bell Canada and B.C. Telephone Co. in long-distance service, it made the federal government and the provinces nervous about possible disruptions in what most people consider to be an efficient and reasonably priced telephone system.

/12851

CSO: 5520/73

CANADA

TASK FORCE ON BROADCASTING POLICY PREPARING REPORT ON CBC

Toronto THE GLOBE AND MAIL in English 22 Mar 86 pp B1, B4

[Article by Harvey Enchin: "Sorting Out CBC's Woes Tough Job Amid Restraints and Power Politics"]

[Text] As they prepare their report, members of the Task Force on Broadcasting Policy must wrestle with the dilemma that has stymied a dozen independent studies of the Canadian Broadcasting Corp. — that the CBC cannot remain as it is and that it is indispensable.

The task force, set up in May by the federal Government, has put off delivering its report, previously due Jan. 15, until June. Although its deliberations about the federally owned broadcasting network are not necessarily responsible for the postponement, there is little doubt that the CBC will form an integral part of the study. The corporation represents half of all broadcasting employment in the country.

Task force officials refused to discuss the CBC, but current and former executives and consultants spoke freely, and at length, in interviews about the Crown corporation. Indeed, it is hard to stop people talking about the CBC.

Since the CBC was created 50 years ago, there have been calls to abandon or sell it, to prune or dismember it and to alter or reshape it. An austerity-minded federal Government has decided to squeeze it.

In 1984, Finance Minister Michael Wilson slashed \$75-million from the CBC's operating budget and \$10-million from capital funds. Parliament has promised \$869.5-million in the fiscal year starting April 1, but CBC president Pierre Juneau says the grant will leave a shortfall of more than \$60-million.

This year alone, the CBC abolished 1,150 positions and laid off 350 employees to accommodate budgetary belt-tightening. Further reductions will have a severe

effect on programs and service to the public, Mr. Juneau has warned.

Cost restraint may produce short-term savings, but, if the Conservative Government continues to deny the CBC sufficient funds to carry out its mandate, Parliament probably will have to find a legislative solution.

The mandate, most recently formally defined in The Broadcasting Act of 1968, demands that the CBC be everything to all Canadians. It requires that the CBC offer services in English and French, which should be extended to, and serve the needs of, all parts of Canada.

It must balance information, enlightenment and entertainment for people of different ages, interests and tastes.

It must promote the exchange of cultural and regional information and entertainment, contribute to the development of national unity and provide for a continuing expression of Canadian identity.

Many of these responsibilities were meant to apply to the entire broadcasting system, but private broadcasters have deserted unprofitable aspects of the business such as Canadian programming and remote distribution to the public sector.

To meet its daunting obligations, the CBC has evolved into a huge, complex machine that operates two television networks and 31 regional television stations, four radio networks and 46 regional radio centres, two satellite-to-cable networks for the House of Commons service, northern radio and television in seven languages, an international shortwave service in 12 languages, one of the world's largest distribution networks with 10 satellite transponders and more than 1,300 radio

and television transmitters.

The surprise is not that the CBC is difficult to manage and that costs are hard to control, but that so much of its money ends up where the mandate dictates it should. In the latest fiscal year, 93 per cent of its total revenue of \$1-billion (including parliamentary appropriations of \$808.4-million) was absorbed by programming and distribution.

Nevertheless, critics find a lot wrong with the CBC. The auditor-general filled 81 pages in his 1984 audit of the CBC with details of the corporation's shortcomings. Over many years, commissions, committees and consultants have reported waste, inefficiency, overstaffing, an absence of strategic planning, a lack of accountability and layers of superfluous management.

The harshest criticism is reserved for the English-language television network, which accounted for \$352-million of the CBC's operating expenses in fiscal 1985.

Although the non-commercial CBC Radio is praised, the television network is condemned because it is not different enough from commercial broadcasters. Like private television, CBC airs U.S. programming and sells advertising time in competition with the private sector.

Other critics complain about CBC broadcasts of opera or ballet in prime time that, although culturally desirable, lose market share.

One major problem is that the CBC is a structural hybrid, a former CBC executive said. It was designed in 1952 to be partly commercial and partly not, partly public and partly private, partly Canadian and partly American, partly business and partly service-oriented. "The ambiguity is greater than of any large organization that I've seen," he said. "If they don't deal with this issue, the problems will continue."

There is no question that internal power politics at the CBC are as disruptive as the external politics of money restraint. The CBC feeds 31 private affiliates that have different goals from stations owned and run by the network. Private affiliates view Mr. Juneau's pledge to reduce U.S. programming as a threat to their profitability.

A study by economics professor Stanley Liebowitz claims CBC private affiliates made a profit of \$23-million in 1978, and CBC-owned sta-

tions lost \$48-million, mainly because the private sector is more efficient. Converting CBC-owned stations to private affiliates, he concluded, could save the taxpayer up to \$134-million a year.

As the CBC lobbies the Government for additional cash, regional factions within the organization contest for more financing. Moreover, should the CBC try to shut down an unprofitable local station, as it did in Newfoundland, regional politics come in to play to overrule a sound business decision.

Unlike other businesses, the CBC is not allowed to borrow money. Successive chief executives have argued that the borrowing restriction keeps the CBC a ward of the state and makes planning impossible.

On the positive side, revenue from the sale of advertising grew to \$212.3-million in 1985 from \$179.1-million a year earlier. The option of forgoing such income to be commercial-free has been dismissed.

However, if the annual report is an accurate reflection of the corporation's state of affairs, business practices at the CBC still leave considerable room for improvement.

The deficit grew from \$49.7-million in 1983 to \$63.7-million in 1985, although, in an odd accounting manoeuvre, the CBC adds back depreciation and provision for employee termination benefits and vacation pay to reduce the deficit figure substantially.

Receivables remain outstanding for an average of 92 days before collection — a situation that would kill most private businesses.

The capital replacement ratio stood at 11.8 per cent in the past year, which suggests the CBC is not spending enough to upgrade plant and equipment. Private broadcasters have high ratios, indicating much more capital spending to stay competitive.

That selling expenses were only 1.7 per cent of revenue points to little effort expended to sell CBC programming products.

CBC executives complain about a lack of financial systems. Ronald Fournier, former vice-president of finance, left the CBC about a month ago as problems developed in a new computerized national finance system he introduced in August.

"Circumstances have forced the

CBC into a crisis management mode," said Sheelagh Whittaker, vice-president of planning and corporate affairs. "There's no other way to deal with the situation."

Ms Whittaker says she hopes to "reassert the importance of planning" in the corporation. But the job is made difficult because the austerity impact of the February budget on the fiscal year beginning April 1 is unknown. "We have to hold ourselves ready for whatever the budget implications are."

Setting up a strategic plan and putting it into force could take three years, she said.

In response to allegations that the CBC is burdened by a byzantine management structure, staff functions have been more clearly defined. A senior vice-president position has been created to look after finance, engineering and other administrative functions while an executive vice-president looks after television and radio operations.

Still, some CBC watchers fear the

corporation is heading in the wrong direction. The CBC brief to the task force on broadcasting policy envisioned another CBC television channel, a superstation, the elimination of U.S. programming and other embellishments to the service that would cost at least an extra \$100-million a year.

"I don't think a remedial vision has been put forward," former CBC executive David Lint said. "The CBC's reach ought not to exceed its plausible grasp." Mr. Lint argues that the mandate lies at the root of the CBC's problems. "The mandate has to be trimmed to match its resources."

Whether the Government will act on the task force recommendations is anyone's guess. So many studies have been made of the CBC without apparent effect that some observers are skeptical that anything can change. "Four years from now," one jaded ex-CBC staffer said, "you'll have another group wondering what the problem is."

/12851

CSO: 5520/73

CANADA

GOVERNMENT RELAXES CELLULAR LICENSING COMPANY

Toronto THE GLOBE AND MAIL in English 1 Apr 86 p B2

[Article by Lawrence Surtees]

[Text]

The federal Government has relaxed its cellular radio-telephone licencing policy to permit the mobile service to be offered anywhere in Ontario, Quebec and British Columbia beginning July 1.

The policy change was disclosed by federal Communications Minister Marcel Masse last month in letters to Cantel Inc. of Montreal and the cellular radio subsidiaries of the telephone companies. It takes effect on the first anniversary of the date that Cantel and Bell Cellular, a subsidiary of Bell Canada Enterprises Inc. of Montreal, began service in Toronto and Montreal.

When the federal Department of Communications issued its original policy in October 1982, it stated that licences would first be awarded for 23 metropolitan centres across Canada. Only after service had commenced in all of those cities would it contemplate licences for other areas.

Cantel was selected as the sole national cellular radio company with rights to licences for each city. It provides service in competition with the local telephone companies.

Executives at both Bell Cellular and Cantel said they are pleased with the change. Robert Rowland, president of the BCE subsidiary, said the change "removes some uncertainties and will allow us to expand our service to many areas in those three provinces earlier than expected."

However, he said he is "disappointed" that Mr Masse also told the company it must wait three months to provide service to Sherbrooke, Que. Bell Cellular had planned to start service there today and had pre-sold many

subscriptions, even though Sherbrooke was not one of the cities on the original list. It will begin service in Trois-Rivieres, Que., which is on the original list, on Thursday.

The company recently conducted a trial at the Monte-Brome, Que ski area near Sherbrooke, in part to provide service during a World Cup downhill championship ski race.

"One of our goals is to provide the most extensive cellular radio service in Quebec, which is why we are anxious to serve Sherbrooke. And we have spent a fair amount of money marketing the planned start-up in Sherbrooke," Mr Rowland said.

Mr. Rowland said marketing staff are currently studying what smaller markets the company should move into. "But it is too early to identify them yet."

Cantel president George Fierheller said "the (new) policy is in eminently good sense because both we and Bell Cellular had been telling the department that we needed to cover neighboring areas around cities we were licenced to serve. The department allowed it, and we were both steadily inching out well beyond the boundaries."

Like Bell Cellular, Cantel is also studying potential communities it may serve in the near future. "Some areas are obvious, such as Bromont, Que., south of Montreal, and the Quebec City-Windsor corri-

dor. But I expect Cantel will move into some small communities because of a large customer or because Bell Cellular is not there," Mr. Fierheller said.

Cantel recently celebrated the signing of its 10,000th customer. "We had projected 15,000 by the end of our first fiscal year, so we're doing not too badly," he said.

The Prairie Provinces continue to be the greatest "problem area" for Cantel because of obstacles to expansion posed by government-owned telephone companies in Alberta, Saskatchewan and Manitoba.

"Manitoba continues to say it does not want a cellular system at all, and Alberta has presented many technical barriers that will require a lot of discussion and negotiation."

/9317
CSO: 5520/75

CANADA

BRIEFS

TELESAT EARTH STATION TOLL--The Canadian Radio-Television and Telecommunications Commission has approved an application from Telesat Canada for permission to change tolls for its commercial earth station services without filing tariffs. The agency said the decision is part of its efforts "to lighten the regulatory burden in both telecommunications and broadcasting." It said the ruling is subject to certain regulatory safeguards to protect against cross-subsidy from revenues for monopoly services. Telesat Canada owns and operates communications satellites. It also operates and sells earth stations. The company is jointly owned by Canadian common carriers and the federal government.
[Text] [Toronto THE GLOBE AND MAIL in English 25 Mar 86 p B12] /12851

FIBER OPTICS MULTIPLEX TERMINAL--Northern Telecom Canada Ltd has introduced a fibre-optics multiplex terminal designed for use on customer premises. The FMT-45C has the capacity to handle the equivalent of 672 simultaneous voice conversations at a transmission rate of 45 megabits a second. Typical applications include linking a building's telephone system to the high public network, to transport high volumes of information economically. The company is a unit of Northern Telecom Ltd of Mississauga, Ont. [Text]
[Toronto THE GLOBE AND MAIL in English 2 Apr 86 p B18] /9317

CSO: 5520/75

INTER-AMERICAN AFFAIRS

BRIEFS

ERICSSON EXCHANGES TO COUNTRIES--Ericsson has received orders for telephone exchanges and transmission systems for a total of 810 million kronor from Guatemala, Mexico and Ecuador. These include orders valued at 225 million kronor from Guatemala, 502.5 million from Mexico and 82.5 million from Ecuador. The orders are primarily for digital AXE exchanges, transmission equipment and expansion of existing telephone exchanges. [Text] [Stockholm SVENSKA DAGBLADET in Swedish 7 Mar 86 p 2] 13232/12947

CSO: 5500/2627

INDIA

BRIEFS

ELECTRONIC PBX MANUFACTURE--Chandigarh, March 22 (PTI)--Haryana is setting up the first project to manufacture 120 lines electronic public automatic branch exchange (PABX) for development of telematics (C-Dot) using indigenous technology. The Central Government set up the C-Dot to provide self-reliance in the field of telecommunications. The technology developed by C-Dot is as good as technology available anywhere in the world and is specially designed for Indian conditions like high traffic and large temperature variations, an official release said here. [Text] [New Delhi PATRIOT in English 23 Mar 86 p 3] /12851

SIEMENS DATA NETWORK--Calcutta, March 20--Siemens has bagged a new order from the Indian PTT administration for further expansion of its text and data network. The order includes EDX switching systems for connecting about 10,000 new telex users in the country. The delivery of the new systems will start this year and including the exchanges already operating in the four metropolises, the country will have the largest EDX text and data network in the world. Siemens is setting up a similar network in Singapore and the firm has established itself as the biggest producer of text and data network systems, with a million user ports already sold, a press release of the company said. [Text] [New Delhi PATRIOT in English 21 Mar 86 p 11] /12851

CSO: 5550/0104

ISRAEL

BRIEFS

FM TRANSMITTERS IN ELAT--The Voice of Israel has installed two FM transmitters in Elat and they are operating on an experimental basis from today. The transmitters are supposed to improve reception in the southern resort city for network B and the Voice of Music. The new transmitters are five times as powerful as the one in use up to now and will get their signals directly from Jerusalem and Tel Aviv without relay stations. [Text] [Jerusalem Domestic Service in English 1100 GMT 3 Apr 86 TA] /9738

CSO: 5500/4502

UNITED ARAB EMIRATES

DIGITAL EXCHANGES FROM FINLAND, SWEDEN

Helsinki, HELSINGIN SANOMAT in Finnish 23 Mar 86 p 41

[News article: "Digital Exchanges from Telenokia to the Near East"]

[Text] Telenokia has won a tender competition organized by Etisalati, the telephone administration of the United Arab Emirates, for supplying digital telephone exchanges to the emirates. According to the agreement made by Telenokia the firm will deliver 31 digital rural exchanges to the United Arab Emirates by the middle of next year.

The agreement deals with six telephone networks in all in various parts of the emirates, and at the outset will serve about 10,000 subscribers, it was announced by Telenokia on Thursday. Etisalati personnel will install the exchanges and control centers under the guidance of Telenokia.

The purchase includes 28 DX 200 exchanges, 3 DX 230 exchanges and 8 control centers. The system is completely computer controlled, and is characterized by the fact that establishing a network can begin with a small number of subscribers and be expanded in accordance with the demand.

In all Nokia communications will equip six networks. In six of the networks the central exchange is also from Nokia and in two of them it is the Ericsson AXE 10, the company indicated. The networks extend everywhere in the country, and even to some Persian Gulf islands. The distances between the local and central exchanges will vary from a few kilometers to a hundred kilometers.

The whole project is to be completed by the middle of next year.

12893
CSO: 5500/2641

FINLAND

PAPER VIEWS CONTINUED UNCERTAINTIES IN TELE-X PROJECT

Helsinki HELSINGIN SANOMAT in Finnish 12 Mar 86 p 2

[Editorial: "Tele-X or Perhaps Not After All"]

[Text] Negotiations on Nordic joint TV operations have dragged along sluggishly from one year to the next. As one problem is resolved technical development already creates new ones. Regarding the Nordsat utopias a decision was finally made last fall for the much more modest Tele-X experiment, which Denmark has temporarily remained outside of. Despite the hard work of the governments of Sweden, Norway and Finland in hammering out an agreement, the enthusiasm for resolving the remaining practical problems seems to lack support on all sides.

From the standpoint of the viewers Tele-X means the transmission of TV programs from other Nordic countries into our own homes by means of a direct satellite link. Because only two channels will be used, however, transmitting all programs is out of the question. Rather a compilation will be made. This compels a selection of programs to be sent but on the other hand makes it possible to translate them into Finnish. At the same time all this involves the creation of considerable machinery.

In our country Yleisradio has been lukewarm or out and out negative all along to the project, which it fears will expend too much of the organization's power reserves. On the other hand Yleisradio is working on a third domestic TV channel together with Mainos-TV and Nokia. The Nordic telecommunications authorities are just as little concerned about Tele-X.

The telecommunications authorities are fixing their hopes on utilizing the existing communications satellites and cable networks. In place of Tele-X they would offer the transmission of at least five Nordic TV channels simultaneously to the cable networks of all the Nordic countries even before the Tele-X test satellite has been put into the sky.

This so-called Nordprog alternative doubtless is tempting with many obvious advantages. On the other hand it would self-evidently no longer have the character of a joint Nordic TV project with a common program and cultural policy dimension, to say nothing of industrial policy.

One of the oddities about joint Nordic TV operations is the fact that the

governments of Sweden, Norway and Finland, which agreed on the Tele-X joint operations, have not been well informed about the telecommunications authorities' alternative. Concluding an agreement on Tele-X was a notable Nordic accomplishment according to the clear emphasis of the Nordic Council's delegates. It would be odd to demand now that Tele-X be exchanged for some other project.

At this stage Tele-X is an experimental project for several years. What happens after that is still very much up in the air. The governments have every reason to keep an open mind on the prospects that have been opened up for the direct transmission of Nordprog's programs. In Nordic TV cooperation in the next decade there could very well be room for the opportunities offered by both Tele-X and Nordprog.

12893
CSO: 5500/2641

FRANCE

TRANSPAC NETWORK SAID TO BE OVERCOMING CRISIS

Paris ZERO UN INFORMATIQUE HEBDO in French 17 Feb 86 pp 71-72

[Article by ES: "Transpac Network: Quality Is Back"; capitalized passages published in boldface; boxed material, graphs and charts follow main article]

[Text] The events of June 1985 will no doubt remain engraved upon many memories. Suddenly, some 7,000 enterprises and some 1 million users of Minitel found themselves no longer able to communicate: Transpac, the world's largest network, was no longer responding to calls.

Actually, this crisis of growing pains had been looming for several weeks. The quality of service had been going progressively downhill since April, owing to increasingly frequent outages of modules and switchers. The principal cause was a software fault of a type whose probability of occurrence, very low at the outset, increased sharply with the rise in number of subscribers addressing the network.

After 2 bad weeks, from 28 May to 7 June, the quality rose again notably during the week of 10-14 June, with the introduction of a software fix and despite a very sustained high level of traffic.

The situation seemed to have been brought relatively under control as of the start of the vacation lull. But on 18 June, the quality plunged dramatically following a series of switching outages and problems encountered in trying to restore some of the switchers to service. These faults kept recurring to a greater or lesser degree throughout the working days between 18 and 28 June. A crisis situation was declared.

The working out of a suitable remedy took several days. On 18 June, a crisis team, made up of officials of Transpac and the DGT, instituted a plan of action for addressing the most pressing problems. Three immediate steps were taken:

--A rebalancing of the load through a redistribution of the lines brought into PAVI's [videotex access points] and into service centers, and the setting up of a statistical monitoring of calls placed on the network;

--A beefing up of the troubleshooting facilities and intensification of research into software faults;

--An increase in network capacity and the relative compartmentalizing of videotex and remote data processing traffic flows, so as to maintain an acceptable quality of service pending (for around 6 months if necessary) the solution of faults found in the software.

THE RESEARCHING OF SOFTWARE FAULTS ENABLED THE DISCOVERY OF SOME 20 OTHER RESIDUAL ERRORS.

These initial actions yielded immediate results. The limiting of booth-traffic points, the routing of 10 percent of the traffic to lesser-loaded switchers in the Paris region, and the controlling of the number of simultaneous calls placed on each switcher (limiting them to 1 per second per switching module) undoubtedly caused unrest and concern among Transpac subscribers and the users of Minitel during the first days of July. But these restrictions were gradually lifted beginning 3 July, and by 5 July the situation was back to normal.

The worst of the crisis had passed but the error still had to be corrected. The emergency steps taken were merely a fix, and the fault could well end up having merely been shifted elsewhere throughout the network as a result of the emergency measures. All facilities were therefore brought to bear on effecting the definitive corrections. Early in July, an additional switcher, of maximum capacity, and priced at Fr 25 million, was installed on a test platform at Rennes.

An operation of this kind normally takes 2 to 3 months to complete, without counting supply and equipment fabrication times. Concurrently, the DGT put at the disposal of Transpac considerable volumes of artificial videotex traffic to be put through the switchers under test, and the maintenance and software validation team was augmented.

Some 30 experts were brought in, some from afar, especially the United States and Australia.

Within approximately 8 days, some 20 faulty pieces of software were identified and corrected. After numerous tests, the correction of errors throughout the network was completed around the middle of August. And on 28 August came the moment of truth: A full-scale load test involving all available facilities was carried out, and demonstrated the soundness of the network with a peak traffic load approximately double that of June.

Network expansion operations were not abandoned, for all that, and, in September, four new first-generation switchers were installed in the Raspail Center to handle the booth-traffic of the Paris region in its entirety, thus lightening the load on the rest of the network.

According to Pierre Fortin, CEO of Transpac, the software corrections resulted in a 20-to-30 percent increase in margin, and the opening of the Raspail Center yielded a further increase of the same order of magnitude. The quality index readings, despite an overall September-October traffic load 15 percent higher than that of the May-June period. [as published]

At the same time that the short-term fixes were being applied, a working group was assigned to define the longer-term approach to preventing the recurrence of similar problems. Its conclusions, submitted in December 1985, center on four points:

--The enhancement of qualification methods, particularly through a beefing up of quality assurance methods during the software developmental phases, and of platform-mounted and network-contained testing facilities. In this regard, it is planned to install a measurement network manned by a national team of "service center links" experts, a permanent monitoring system, and a technical assistance service for subscribers (call number 13) as well as for service centers, which can call an 8-digit number in case of a problem.

--Improvement of network dependability, particularly as regards routing, making it possible, for example, to take manual control of this function in case of emergency. The fact is that too automated an approach to procedures was undeniably an exacerbating factor during the crisis.

--Planning of the evolution of the network's architecture, calling for the putting in service of 50 SESA DPS 25 second-generation switchers between now and the end of the year (5 have already been installed since September); introduction of Alcatel-Thomson around the beginning of 1986; and replacement of the Mitra 125's by Mitra 625's in the area of first-generation equipment, so as to double its capacity.

--Together, these measures should enable Transpac, in 1986, to expand the number of its direct accesses to more than 40,000 and to reduce its subscriber linkup waiting time to 2 months. The network thus seems to be being set up to respond to a sustained demand for remote data processing applications.

On the other hand, new applications are appearing in the area of business communications, involving the use of microcomputers, videotex terminals, word processors, etc.

To provide two-way communication within this new family of terminals, into which telex and telecopying are also being integrated, an "orchestra leader" has become necessary: No sooner said than done, with the entry of Transpac into the electronic message field with Atlas 400 service, which will be operational beginning the second half of 1986.

[Boxed material, center right, p 71]:

Where Is the Error?

At the root of the June crisis was a superposition of dysfunctions and aggravating factors. The essential cause was a software fault in the initial design of the first-generation switchers.

Two internal automations manage the state of a virtual circuit inside each switcher: One at the level of the signaling unit (Mitra 125), called the "control unit," which puts through and breaks off the call; the other, at the level of each packet-switching unit (CP 50), called the "switching module."

These two states are managed asynchronously. What occurred was that the two automations became incoherent when two conditions coincided: On the one hand, a large number of incoming calls per second under load causing a slowing of the control unit and increasing the de-synchronization of the two automations; and on the other hand, a rising rate of call/release sequences, causing in turn an increase in the rate of effective actuations of the programming error with increased loading of the network.

Under these conditions, it is not hard to understand the extent to which the rapid growth of booth traffic (a generator of high rates of calls, and the general evolution of traffic, translating into shorter and more numerous calls, became aggravating factors.

[Boxed material, bottom, p 71]:

Atlas 400 Service

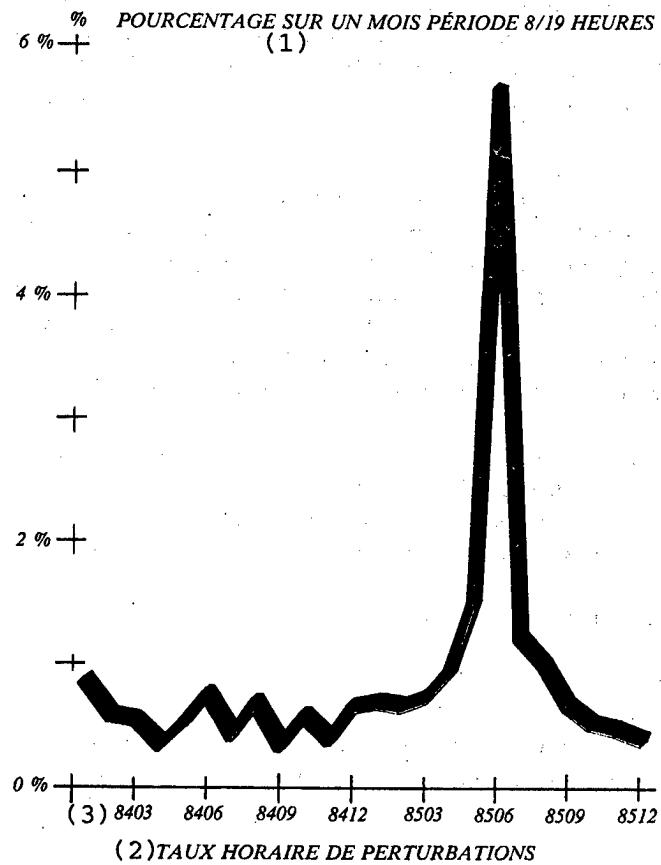
Atlas 400, due to become operational the last quarter of 1986, will be a public written-message handling service based on the CCITT's international standard X 400 and the X 83 system, oriented essentially towards the business clientele.

Atlas 400 will be accessible via the telephone, telex and Transpac (and eventually Transcom and Transdyn) networks, and will provide conversion of standards to accept all types of terminals and protocols: Telex, tele-type, teletex, videotex, X 25, X 32 and, eventually, Groups 3 and 4 telecopy.

In accordance with the X 400 standard, the service will also offer standardized interfaces for the private message service centers of business firms and service companies.

The service itself will enable the sending of multiple-address messages to subscribers of the service (or subscribers of other interconnected message services) as well as to non-subscribers.

The latter will only be able to receive messages via direct forwarding, whereas subscribers will have a choice between direct forwarding (automatic) and retrieval on call (mailbox system), with switching to and from either of these modes being possible at any and all times.

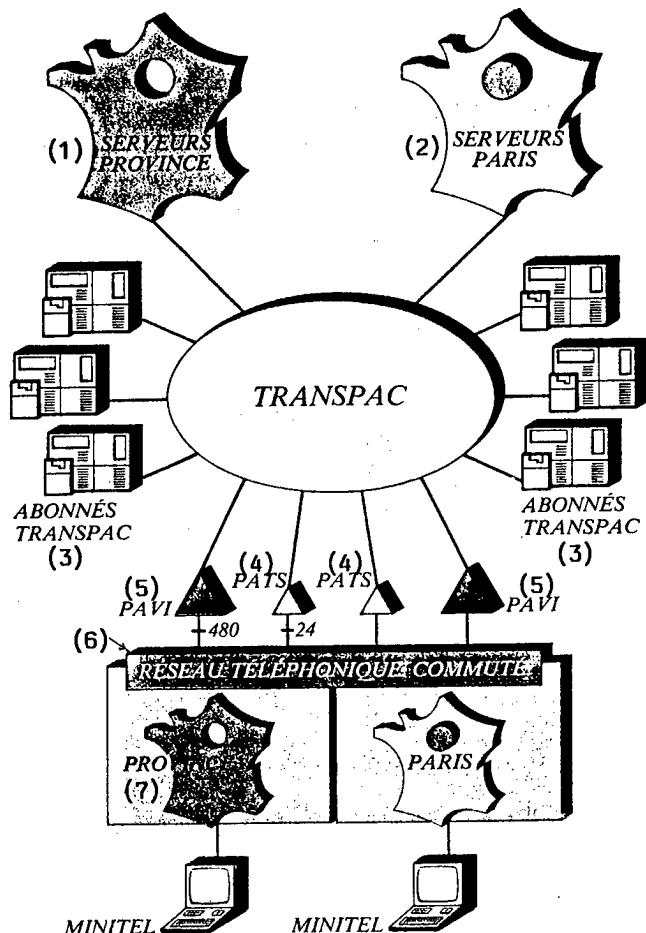


Key:

1. Monthly Percentage for Period 0800-1900 Hours.
2. Hourly Rate of Disruptions.
3. January 1984 through December 1985.

[This graph not further clarified]

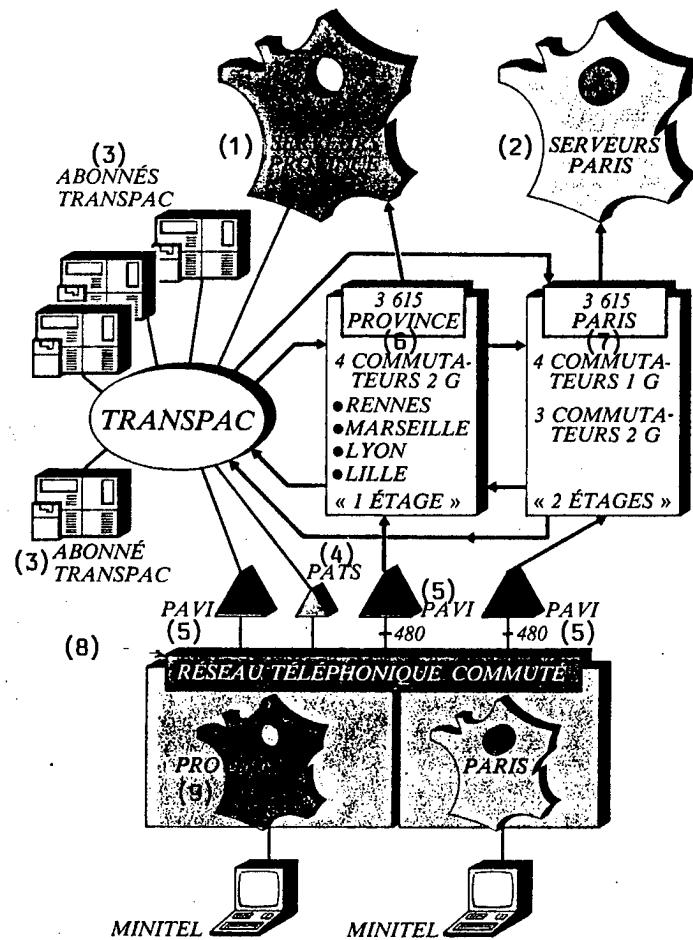
General Configuration of Network as of June 1985



Key:

1. Service centers - provinces.
2. Service centers - Paris.
3. Transpac subscribers.
4. PATS [not further identified].
5. PAVI [Videotex Access Points].
6. Switched telephone network.
7. Provinces.

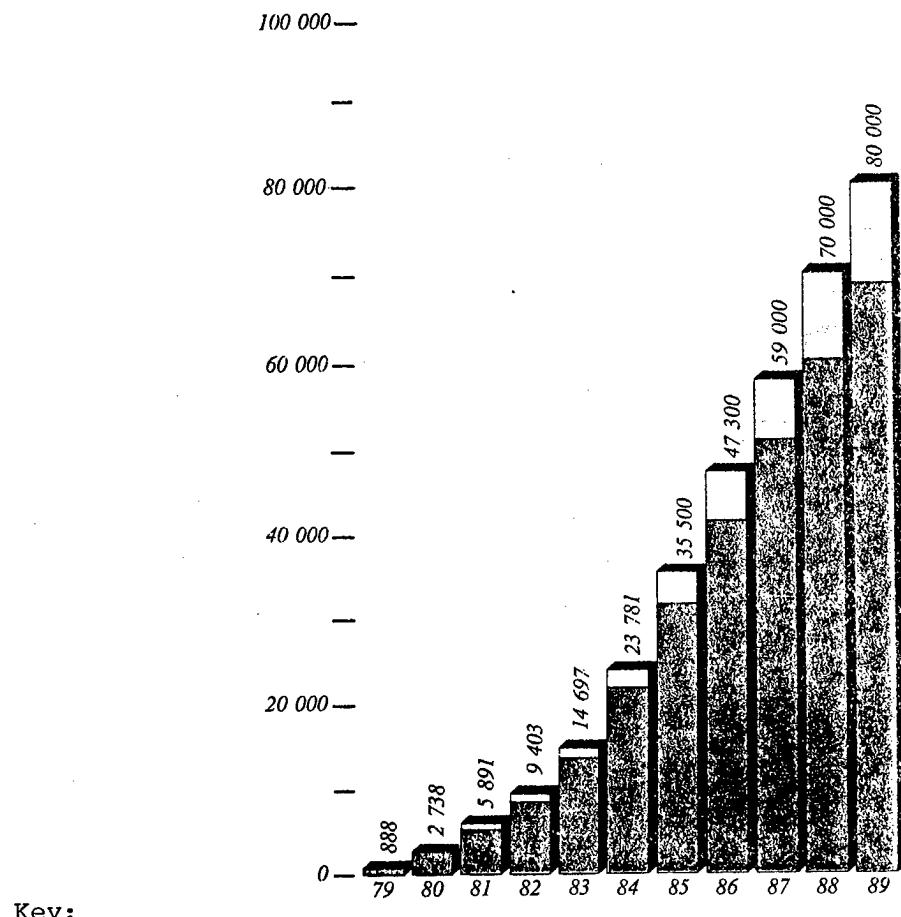
General Configuration of Network Planned for Mid-1986



Key:

- | | |
|-----------------------------------|--------------------------------|
| 1. Service centers - provinces. | 7. Paris: |
| 2. Service centers - Paris. | 4 Switchers 1 G. |
| 3. Transpac subscribers. | 3 Switchers 2 G. |
| 4. PATS [not further identified]. | "2 Stages" |
| 5. PAVI [Videotex Access Points]. | 8. Switched telephone network. |
| 6. Provinces: | 9. Provinces. |
- 4 Switchers 2 G:
 Rennes
 Marseille
 Lyon
 Lille
 "1 Stage"

Transpac Growth 1979-1989



Key:

[Dark gray (blue as published) = direct accesses; light gray (green as published) = indirect accesses].

9399

CSO: 5500/2628

SWEDEN

AGENCY, ERICSSON JOIN EC RACE RESEARCH PROJECT

Stockholm SVENSKA DAGBLADET in Swedish 27 Feb 86 p 30

[Article by Karin Henriksson]

[Text] It was a surprise when something as genuinely Swedish as Televerket (National Telecommunications Administration), joined EC's RACE research project.

The purpose of RACE is to provide Europe with a wideband network for telecommunications. This network will be faster, as well as having the ability to provide many times greater capacity (including voice, data and video) than current ones. Altogether, the EC-commission has approved 31 projects for a total of 250 million kronor, in an initial study phase expected to be carried out over the next 18 months.

The EC has been very restrained regarding the entry of outsiders (that is, non-member countries) into their different research projects, mostly because the EC-commission contributes half the project cost of the twelve member joint budget.

Expressways

Kurt Katzeff, head of the department of basic technology at Televerket, says that it was only at the last moment that Televerket was allowed to participate in a sub-project called IVICO (Integrated Video Codec).

This project concerns videocoding for the wideband network, the expressways of future telecommunications, he says, and adds that Televerket has conducted research concerning high quality TV video transmission over the telecommunications network for several years. 1.5 million kronor is what the whole project is going to cost and the difference from other participating organizations is that the latter receive financial assistance from the EC-commission.

"I have personally strived to make RACE a European project, not an EC project. One cannot, in my opinion, build these 'expressways' without the EFTA-countries being included," continues Kurt Katzeff.

Ericsson

The Ericsson organization is participating in no less than five different sub-projects - under the auspices of three foreign subsidiaries in different EC countries; the Italian Fatme, the Spanish Intelsa and the Irish L.M. Ericsson, Ltd.

RACE is a very ambitious program and if it becomes reality, it will be a big thing both for the European countries and the European telecommunications industry. The idea is to accomplish what the Americans and the Japanese can do purely because of their size, says Per Akerberg, who is a coordinator at Ericsson.

The participation of the U.S. in the 31 projects is also visible in the approved RACE program. IBM France is part of one, and the West-German Electric Lorentz, where ITT has majority ownership, is involved in seven projects.

By the way, RACE means Research in Advanced Communications for Europe and the idea is that the new wideband network shall be operational in 1995. During the study phase, the network technical requirements specifications will be generated - both for suppliers and manufacturers. By the end of the current year the EC Council of Ministers will decide on the future of RACE.

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SWEDEN

ERICSSON QUALITY IMPROVEMENT CAMPAIGN VIEWED

Stockholm SVENSKA DAGBLADET in Swedish 1 Mar 86 p 26

[Article by Sophie Petzell]

[Text] Quality Control has produced results for us. Production has increased, deliveries are more often on time and suggestion activity has tripled, says Christer Jungsand, head of the Ericsson production facility at Alvsjo in the south of Stockholm.

We have arrived at a point where the main goal of our efforts must be to see to it that things are delivered on time. It may sound comparatively simple. But it has been revealed that too few products are reaching their destination on the day promised. This is, in a way, normal for the rest of the industry as well, but it is not good.

Quality Control in Alvsjo was introduced by a customer opinion survey of products and deliveries. The result was surprisingly negative. We really thought we were good at this.

The production facility at Alvsjo employs about 400 people, 170 of which are white collar workers. The factory develops the prototypes of the Ericsson products, primarily within telecommunications. That means that the production processes are tested. If something goes wrong here, production at all other factories within the company is impacted, with additional delays as a result. Thus, the key customers are other Ericsson production facilities.

"Return Match"

Almost all employees at Alvsjo received training on how to think quality last year. At this unit alone, the choice was made to gamble within the concept "return match."

Sweden had just lost the world championship game in ice-hockey to Canada, and Ericsson was competing with a Canadian company for a giant order from Great Britain.

The training program brought about a general discussion on quality, but it also put great emphasis on placing the activity of the factory at Alvsjo in

its proper context. Everyone was to get a picture of where in the process they fit and what the factory is involved in and who the customers are.

Influencing Allowed

Employees in turn, would have the opportunity to impact their own work in a favorable manner. They have been encouraged to contact the next link in the production chain at their place of work to find out if the recipient possibly would like work done in a different way.

"The entire chain, from the drawing board to the finished product, is being examined. Every delay or process error means extensions of final delays. We received the order from Great Britain and that resulted in extra work at the end of last year," says Christer Jungsand. Of course, I don't know if the Return Match is to be credited but, when asked, some 200 employees showed willingness to show up for work during the Christmas holidays, in order for delivery to be ready by the turn of the year. Never before have so many announced their willingness to work voluntarily.

Of course, it is also difficult to say if other improvements are linked to the Quality Control project, or if they are a pure coincidence. The fact remains that we, during the second half of 85, produced more and better than ever.

Rising Interest

A different manifestation, out of the interest for the company, is that suggestion activity has increased significantly. During a normal year about 30 employee suggestions are submitted. Last year, 111 suggestions were turned in. A contributing reason could have been that all suggestions were rewarded with a Bellman lottery ticket.

One of the employees in Alvsjo, Karin Ljungdahl, will, beginning with next month, work full time on the project. Among other things she issues a small newspaper about the Quality Control work. She will handle visiting groups, also a part of inside activity, and she will follow the Quality Control work. Not until now can we seriously get going on formulating goals, says Christer Jungsand. Work will be carried out over the long-range.

Ericsson Went All the Way

The Ericsson organization has invested 16 million kronor, time and work, and is totally engaged in a Quality Control program - bigger and more extensive than what any other Swedish organization has undertaken so far.

The word quality really means characteristic, says the man responsible for the project, Carl-Goran Larsson. We actually mean 'good' quality, as we work on the project.

Carl-Goran Larsson is one of eight people at the Ericsson head office working full time on the program, called EQ, meaning Ericsson Quality. EQ began with

philosophical ponderings and study tours all over the world. This resulted, in and of itself, in the simple reasoning that quality improvement means the involvement of everyone in all areas of the organization, that all employees shall strive for better quality across all product lines, that deliveries shall be on time and that the delivered product shall be perfect in all aspects.

Includes All Employees

Quality thinking within Ericsson was first to be anchored at the highest corporate level and then gradually spread downwards in the company, to eventually include all 75,000 employees, half of whom work abroad. The initiatives for concrete measures must eventually come from local levels within the organization.

The action program is now being implemented. During 1983-85 some 1,000 of the higher level managers in the company, received two days of training. It is also those managers who received the first training who themselves are responsible for the next step - a two day seminar for the some 4,000 divisional and departmental managers. This program got its start in 1984. Even this program is, by now, just about completed.

The EQ philosophy is spreading to every work place, etc. via quality groups formed by the initiative of and after consulting with local managers. The groups, as such, receive 16 hours of training. Everyone has the opportunity to be a part of these, so called, EQ teams. Carl-Goran Larsson is keen to point out that the program is not aimed at generating some sort of across-the-board enthusiasm, but that it really is a question of everyone coming up with concrete goals and really move into action.

All available information channels have been used. Besides thick folders of course material, information has been distributed through videotape, a special newspaper, flashily printed fliers, emblemed shirts and the sponsoring of the Tiomila (Ten-mile), cross-country orientation race.

Difficult to Measure the Result

The material has cost 5-6 million kronor. Ten million has been sunk into the methodology program.

The Result?

"It is hard to measure. It is far easier to point to a row of isolated steps that have resulted in, among other things, improved engineering drawings, improved production methods with lesser rejects, more dependable customer deliveries and better service in the field."

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SWEDEN

PAPER VIEWS 'SLOW' PROGRESS IN TELE-X VENTURE

[Editorial Report] Stockholm SVENSKA DAGBLADET in Swedish on March 7, 1986 publishes on page 2 an article on Tele-X, a project aimed at making Danish, Norwegian and Finnish TV programs viewable on Swedish TV sets. The Tele-X project has been in existence for more than two decades, without achieving much progress. Traditionally the lack of progress has been blamed on the absence of cooperation from the Swedish Social Democrats, at the helm in Sweden long before the start of the Tele-X project. The article notes:

"There was once a far better alternative, the old Nordsat project, which simply was aimed at making TV programs of all Nordic countries available in each Nordic country. It came to nothing, primarily due to the narrow-minded nationalistic veto of the Swedish Social Democrats."

Lately the Tele-X project is showing signs of activity. During a recent session of the Nordic council, the Tele-X project was part of the agenda. The article further notes:

"The affected governments are now set for experimental work with Tele-X to get started during the second half of 1987." The article also notes: "If things go the way they should, we will, towards the end of next year view Danish, Norwegian and Finnish TV programs on our own sets at home, without it being bought and chosen by Swedish television."

Access control and program edit responsibility, long a very debatable issue, is further focused on by the article:

"It will, however, be chosen on our behalf just the same. Tele-X will have two channels for the transmission of TV programs. Thus only a smaller part of the network will be possible to see outside the borders of the originating country. How and by whom the program will be chosen and edited, is at this time a problem far from a solution."

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SWEDEN

BRIEFS

CHINESE ROCKET TO LAUNCH SATELLITE --A Swedish aerospace firm has reserved space on the Chinese "Long March 2" rocket for launching a satellite. If a final agreement is reached, the satellite would be released in space along with a Chinese earth reconnaissance satellite in two to two and a half years. The Swedish "Mailstar" is a small satellite which from its polar orbit is intended to handle postal service tasks such as the transmission of telex messages. A separate launch for such a small satellite is not feasible. But few options are available for inclusion elsewhere as an additional cargo because most satellites are placed in other orbits. Therefore, the Swedes are considering whether they ought to use Ariane technology to build a small rocket for this purpose which could be launched into space from northern Sweden. The current arrangement involves an agreement whereby China and Sweden jointly develop the drive system which is to place "Mailstar" in the proper orbit.
[Text] [Frankfurt/Main FRANKFURTER ALLGEMEINE ZEITUNG in German 19 Mar 86 p 31] 12552

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